

THE NEW
INTERNATIONAL
YEAR BOOK

THE NEW INTERNATIONAL YEAR BOOK

A COMPENDIUM OF THE WORLD'S
PROGRESS

FOR THE YEAR

1935

EDITOR

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FUNK & WAGNALLS COMPANY
NEW YORK AND LONDON

1936

PREFACE

THE RINGING DOWN of the curtain on the year 1935 shut out a scene of bitter antagonism, political and personal rather than economic and industrial, for the like of which one must look back to the early years of our great Republic. Then, as now, men believed that human values were of far greater importance to the Nation's welfare than property values, personal possessions, or riches, and that before political differences could be satisfactorily adjusted the economic and industrial problems would have to be solved, and solved not by patch-work methods but by such adjustments of the body politic as would assure stable government.

The conditions through which we have passed have proved severe enough to test the mettle of man. The hardships and handicaps through which we have gone have helped us to build on a solid foundation for the future. These experiences have given us a sense of the responsibility and of the value of money; they have kept us from becoming unduly optimistic as well as prevented us from being altogether pessimistic.

In the entire circle of the year, no one came forward to prescribe a universal panacea for the ills of the time, world-wide though these have been, and, such as survive still are. But, by unanimous prescription, the Judicature of the United States Supreme Court shook to its very foundations the work done by Congress when passing the NATIONAL INDUSTRIAL RECOVERY ACT.

It is a matter of newspaper record that, in the course of the past year, the Administration was accused of Bolshevism or something akin to it, Communism, Fascism, Naziism, Socialism or some such other variety of -ism as may have been advocated in the eager rush that has been made to find some panacea for the ills of the world—those ills that we share in common without regard to race, creed, or color. Seldom or never has an Administration been credited with less worthy motives. The idea that it set out to better conditions generally, with the intention of pulling the masses out of that slough of despond, does not seem to have found favor, if ever it occurred to those engaged in the depreciation of all efforts made to build up.

Are the barbarities of life no crueler than its conflicts? Indeed, they are more so. The childishness and brutality of the times in which we live, with their attendant cruelty man to man, belong more to nations at war than to nations blessed with peace, and so the struggle between Labor and Capital continued. With us financial avidity is in continual conflict with commercial greed; for, no sooner does a commercial enterprise succeed in establishing itself than we find the ambassadors of high finance outside the door, knocking for admission and ready to exploit or to inflate that success to the point of expansion that commonly leads to a crash. Surfeits of mutual indulgence such as we experienced in the past could not continue in 1935 any more than they could continue in 1865, when the cost of the necessities of life, commodities, and clothing rose beyond the price of purchase and could be obtained only by barter.

Such are some of the thoughts that the reading of the record of the year 1935 has awakened—a record through which the joy of life has run briskly side by side with its trials and troubles, its terrors and its tragedies.

Bared of all glamour, the record of facts that follows is presented with all the frankness at the command of those who glory in the freedom of the pen with which they write and of the press through which they publish. Whether or not the benefits received outbalance the liabilities incurred some things are certain—there have been readjustment and recovery; conservation and relief, all of which may be credited to the efforts of one man of outstanding personality, who, when the storm of depression threatened to overwhelm the ship of State, was summoned to serve as pilot, and steered such a course between rocks and shoals as to bring his ship into the open though turbulent sea.

Political unrest marred the measure of economic progress that was attained during the year. This affected the leading nations of the world and was evident in the United States, France, Germany, Great Britain, and Italy. In a lesser degree it was present in Austria and even in the most peaceful of all the nations of the world, Switzerland. Discontent over the progress made characterized dissension in the United States; the return to office of a large Conservative majority by the electorate of Great Britain showed the dissatisfaction of the proletariat with things as they had been, and this threw out of office members who were representatives of the Labor interests if not members of the party. Late in the year the unrest acquired additional strength in Britain through the fear of war that had seized the Secretary of Foreign Affairs. This fear led him into the position of a statesman reduced to playing politics, and such poor politics as felt the force of public indignation when revealed.

Empowered by the Coördination Committee of the League of Nations at Geneva to draft a peace plan to be submitted to the three parties concerned in the African War—Italy, Ethiopia, and the League of Nations—the British Foreign Secretary, SIR SAMUEL HOARE, and the French Prime Minister, M. LAVAL, drew up proposals that, according to their views, would have given to Ethiopia an outlet to the Sea, and more than she will be likely to get if defeated by Italy, and to the Italians much less than the Italian Government demanded before it began hostilities. But the idea that an aggressor nation should be rewarded for its aggression at the expense of the nation whose territory it had invaded was repulsive to both the British and the French people. The clamor raised appalled the British Prime Minister, STANLEY BALDWIN, who determined that it could be stilled only by prompt and effective action. The Foreign Secretary tendered his resignation and it was accepted. His proposals were repudiated by the Prime Minister who declared that much harm had been done and that he was "determined that such a position should not be possible again." The fall of the French ministry was expected to follow immediately but did not occur before the close of the year.

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The danger into which British politicians had led their country, and one possible result of the wrangling over the bringing about of peace between the Italians and the Ethiopians, was the imperiling of the existence of the League of Nations. Amazing as this was it was nothing to the indignation of the press and the clamor of the people when it found itself betrayed by its own ministries. An interesting sidelight of this period was cast by the word *Sanctions* which was played up in the press almost as freely as the word *sophisticated* had been years before. To the man in the street "Sanctions" was nothing more than an expression of disapproval indicated in a ladylike way. Alas, that English diplomacy and statesmanship should descend to the use of euphemistic terminology. Here was a case in which the public had been fooled through the using of soft-sounding terms that had ugly meanings and still uglier implications. Having proposed one thing and done another no wonder the public was incensed. The French people too were not slow in condemning their ministers.

In France the ever effervescent spirit of the masses asserted itself over diplomatic and official circles, and men and parties strove to do their best to steady the ship of State and to muffle the mutterings over economic conditions that, before the year lapsed, showed only a modicum of improvement.

In Germany, the agitation around the return of the Saar to the Reich having subsided, after a convincing plebiscite, another was fomented by restrictions on liberty of worship, and by renewed oppression of the Jews. Amazing as these conditions proved to be they awoke compassion for a suffering people, and at the time of writing steps had been taken to bring relief to the oppressed by migration *en masse* to other lands.

In view of the foregoing comments, the Reader will welcome the various illuminating contributions on INTERNATIONAL RELATIONS and FOREIGN AFFAIRS from the able pen of MR. RONALD S. KAIN, Associate Editor in charge. MR. KAIN reports the following as outstanding events in his department:

The Franco-Italian accord of Jan. 7, 1935, ended 15 years of dangerous friction between the two nations in Europe and Africa and completed, temporarily, the isolation of Germany. Chancellor Hitler's unilateral repudiation of the Versailles Treaty in decreeing restoration of military conscription on March 16 led to the Stresa Conference of April 11, 14, where an Anglo-French-Italian front designed to prevent further treaty violations was established. The Franco-Soviet mutual assistance pact signed May 2 added another powerful link to the French chain of alliances forged against Germany.

The Stresa front was soon shattered, first by the Anglo-German Naval Treaty of June 18, through which Britain openly abetted Germany's repudiation of the naval limitations imposed by the Versailles Treaty, and again by Italy's aggression upon Ethiopia, commencing October 3. Mussolini's Ethiopian adventure, launched in bold violation of the League Covenant, the Kellogg-Briand Pact, and the Italo-Ethiopian arbitration treaty of 1928, brought Britain and Italy, and with them all Europe, to the verge of war. It precipitated the first attempt by the League States to restrain and punish an aggressor through the collective application of economic and financial sanctions.

Britain, by her firm opposition to Italy at Geneva, seized the leadership of Europe from France. The latter, weakened by factional strife and deepening economic depression at home, saw both her prestige and her security against Germany sink to the lowest level since the World War. Meanwhile, the opportunity presented by Europe's absorption in the Ethiopian dispute was seized by Germany to hasten her rearmament and by Japan to extend her control over additional provinces in North China and Mongolia. This menace from both Germany and Japan explained the abortive Hoare-Laval peace proposals of December, designed to buy off Italy at the expense of Ethiopia and restore the Stresa front.

Against this background should be viewed the feverish and world-wide arming of the nations, the complete collapse of the Geneva Disarmament Conference; the unofficial British peace ballot, with its overwhelming endorsement of the League of Nations and of the idea of collective security based upon economic and military sanctions; the victory of the Conservatives on a rearmament platform in the British general election of November 14, and Japan's demand for parity at the London Naval Conference, which opened December 9.

Other notable trends and events of the year were: The general economic recovery in practically all countries except those adhering to the gold standard and to deflationary policies; the sturdy resistance offered the further expansion of fascism, particularly in France, Spain, and Japan, the countries most threatened with Fascist rule, the Liberal triumph in the Canadian general election, followed by the conclusion of an important Canadian-American reciprocal tariff treaty on November 15; termination of the Chaco War, the end of Gen. Juan Vicente Gomez's 27-year-old dictatorship in Venezuela; the abortive radical revolt of November in Brazil, the clash between President Cardenas and ex-President Calles in Mexico, and establishment of the Philippine Commonwealth on November 15. Also, the restoration of the monarchy in Greece, effective October 10, the resignation of President Masaryk, Czechoslovakia's great statesman, and the election of Eduard Benes as his successor on December 18, the death of Marshal Pilsudski, dictator of Poland, on May 12, the substantial economic recovery in Belgium following the abandonment of the gold standard and devaluation of the belga on March 29, the passage of the Government of India Bill by the British House of Commons June 5; Labor's victory in the New Zealand elections of November 27, and the revival of the violent nationalist agitation in Egypt.

On developments in our land, MR. PHILIP COAN, in charge of the Department of the UNITED STATES as a whole, and of the forty-eight STATES and ALASKA, contributes the following able succinct summation:

The fortunes of the great Federal venture into new realms of government were still the centre of interest in the United States and the foremost common concern of its citizens. The "New Deal," checked and disconcerted in some of its chief purposes by the SUPREME COURT, advanced aggressively in other directions; thus it employed the taxing power for the gradual exhaustion of the conceived excess of great concentrations of private wealth, and it laid new taxes to support a permanent system of regular benefits to the superannuated poor and to persons cast out of employment.

A competing influence on the course of national affairs was the increasing well being of the people as a whole. This improvement, plausibly due in great part to two years' outpouring of Federal funds for the so-called pumping of the economic pump, had been erratic and often dubious, until the middle of 1935; thereafter it became increasingly manifest in many fields. Economic betterment, by rendering taxes more prolific, aided the Federal Government and the States as well. But the temper of the people grew cooler to radical proposals as crops grew more profitable and industries became busier, response to the Federal Administration's grievance against the Supreme Court and the Constitution lacked fervor, and criticism of the unabated Federal expenditure and deficits began to spread.

The tide of the Nation's affairs was therefore diverse, intricate, and difficult to judge as to its general course - a matter of import to the people, universally and severally.

To MR. LOUIS M. HACKER the Editor is indebted for the following views related in part to the work in his various studies in ECONOMIC, SOCIAL, and POLITICAL SCIENCE:

The SUPREME COURT decision declaring the National Recovery Act unconstitutional was an outstanding event of 1935, especially since it precipitated chaos in so many fields, including labor relations, child labor, and alcohol control. Order was restored in some of these before the year closed, but the important matter of child labor was returned to *status quo ante*, which led to the revival of the campaign for a prohibitory constitutional amendment. Of al-

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most equal importance was the passing of the Social Security Act, which will be of fundamental importance in the future in the fields of old age pensions, care of dependent children, and unemployment insurance, multiplying the number of State statutes in these fields, bringing a large measure of uniformity to them, and underwriting to some extent the allowances provided by them. Governmental control of labor relations continued to the fore with the establishment of the National Labor Relations Board. Other significant events in various fields were the appearance of marked divisions of sentiment in the labor union and socialist fields, the former over the question of industrial unions, the latter over tactics in the period of social chaos which is adjudged to be prospective, the continuation of the strike wave in the United States, outstanding occurrence of the year being the Terre Haute general strike, the attempt of the Federal Government to liquidate the relief problem by an enormous works programme, the expansion of the cooperative movement, the marked decline of emigration; the increase in the number of lynchings; the conviction of Bruno Richard Hauptmann for the murder of the Lindbergh baby; the revival of dry sentiment and propaganda, the intensification of the persecution of the Jews in Germany and the continued development of Palestine as a Jewish national home, and the attempts of the Nazi Government to tighten its grip on German labor.

MR. CHARLES E. FUNK, Associate Editor in charge of the MINERAL DEPARTMENT, reports that in virtually all fields of mineral production the year showed substantial progress toward recovery:

Steel ingot production in the United States advanced 30 per cent over the previous year, pig iron 33 per cent, gold 15 per cent in all directions production, and its necessary adjunct, consumption, was higher than in any year since 1929 and some minerals closely approached that peak year. Contrary to the artificial spurt in 1933, induced by the replenishment of stocks against the fear of great advances in price, the stimulus in 1935 seemed to rest on the solid basis of actual market demand. Though the recovery movement was world wide, it was more noticeable in the United States where the movement had been slower in gaining headway.

As DR LESLIE SPIER of Yale University has ably pointed out, the year 1935 was a very sober one in his field, ANTHROPOLOGY. There was a noticeable growth in the number of anthropologists, especially in this country, in the past few years, and their labors are now bearing fruit. Dr. Spier was impressed by the amount of activity in the Soviet Union.

GEN JOHN J. BRADLEY, contributor of the article on MILITARY PROGRESS, summed up developments in this field as follows.

Unrest has marked the past year throughout the world. Momentous changes in thought and action along defensive and aggressive military lines have resulted in madly pressed military preparations on land, sea, and in the air.

One striking aspect has been the militarization and instruction of the children and youth of the world in Italy, Germany, Russia, Japan, and making obligatory military training prerequisites for graduation in grade, intermediate, and university classes.

All nations, except the United States, have prepared for gas and bombing expeditions, with compulsory drill of populations in protective measures. Extensive galleries and bomb-proof construction have been provided, with plans developed for moving whole populations from danger spots. While there is no immediate threat, danger lurks everywhere. Russia fears further Japanese expansion in China Outer Mongolia, skirting the Soviet Russia frontier, if occupied by Japan would place her hostile military forces within striking distance of the all important Trans-Siberian Railway connecting Moscow with Vladivostok. Russia also faces danger of attack by Germany from the rear should Japan strike. Great Britain evidently fears Germany and Italy. Germany flouts the Versailles Treaty, rearms and prepares her military machine feverishly. Whom she will strike is uncertain. Great Britain prepares to abandon her impregnable Malta and covets Crete. Italy makes progress in Ethiopia. The United States abandons the Philippines.

On conditions in the field of PSYCHOLOGY, DR. GORDON W. ALLPORT, of Harvard University, makes the following illuminating comments:

It has often been prophesied that the twentieth century will witness as great advances in mental science as the nineteenth century witnessed in biological science. The prophecy seems to be coming true. The revolution in thought marked by the rise of the Gestalt school has given new incentive and new direction to almost every branch of psychological work. During the past year this development has been greatly accelerated in the United States by the combining of forces of American investigators with those of the distinguished German scholars who, for political reasons, have taken up their residence in this country. Coupled with the re-orientation of systems and theories is the new interest of psychologists in the application of their science. To a large and significant proportion of the profession the problems of social reconstruction are no longer viewed as outside the range of legitimate scientific concern.

In the Department of ANIMAL HUSBANDRY, DR. GEORGE HAINES, of the United States Department of Agriculture, besides discussing the latest phases of Dairying, Livestock, and Wool, reported that:

Reduced pork production in the United States, a condition rendered more acute by a reduction in hog numbers in European importing countries, was the most important factor in the livestock situation of 1935. Limitations on imports of meat by the United Kingdom and fats by Germany, are playing an important part in modifying production in meat and lard exporting countries.

MR. FRANCIS D. PERKINS, assistant music critic of the *New York Herald Tribune*, gives the following résumé of the world of MUSIC.

The United States Government, for the first time, undertook support of musical activities on a large scale with the Federal Music Project, inaugurated in August to meet the long existing and serious problem of unemployment among professional musicians. Free concerts of various kinds and recreational and social activities were the principal undertakings directed by the Project for this purpose, while it was also planned to give representation in these concerts to American composers and appearances to promising, while not yet well known, executant musicians, helping to offset the handicap faced by both these groups in the regular musical field.

The year also brought the close of the twenty-seven year régime of Giulio Gatti-Casazza as general manager of the Metropolitan Opera Association of New York. With the support of the Juilliard Musical Foundation, America's senior opera company was enabled to tide over its fourth annual economic crisis and begin the 1935-36 season with Edward Johnson, Canadian-born tenor, as the new general manager. A movement toward the presentation of opera by symphony orchestras of other American cities as part of their regular curricula, which promised to be of considerable importance in the fall of 1934, received a setback when the Philadelphia Orchestra, which had made the most ambitious experiment of this kind, decided in the spring to abandon it on account of the cost. Opera, however, was continued in the 1935-36 schedules of the Cleveland and Detroit Symphony Orchestras, and was taken up for the new season by the Cincinnati Symphony.

The most publicized new work to receive its world première in 1935 was probably *Die Schwiegswasse Frau* by Richard Strauss, first produced in Dresden, Germany on June 24. Soon afterward, Strauss resigned the position which had made him one of the principal figures in the official world of German music, the presidency of the Reich Music Chamber and the chairmanship of the League of German Composers. Official disapproval of his collaboration with the Austrian-Jewish author, Stefan Zweig, in this opera, was believed to be a factor in this step, although that was not the composer's publicly announced reason for his resignation.

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The year was unusually rich in prominent anniversaries, including the 250th birthdays of Bach and Handel, and, among living composers, the seventieth birth of Jean Sibelius. These anniversaries were widely observed by musical organizations both in Europe and America.

In the DEPARTMENT OF BIOGRAPHY, MISS HELEN READY BIRD, Associate Editor in charge, reports that death took his usual toll of the noted throughout the year, and of the many eminent men and women who "shuffled off this mortal coil" may be mentioned:

Juan Vicente Gomez, dictator of Venezuela for more than a quarter of a century; the Marquis of Reading, one-time Viceroy of India; Huey P. Long, American Senator and "Kingfish" of Louisiana; Jane Addams, American sociologist and founder of Hull-House; Astrid, Queen of the Belgians; Francis Cardinal Bourne, well-known prelate of the Roman Catholic Church in England; William "Billy" Sunday, American evangelist; James H. Breasted, American Orientalist and founder of the Oriental Institute; Henry Fairfield Osborn, American paleontologist and former president of the American Museum of Natural History; Hugo De Vries, Dutch botanist and exponent of the Mutation Theory; Michael I. Pupin, American physicist and inventor; Dr. John R. Macleod, co-discoverer of insulin and Nobel Prize winner; Dr. Franklin H. Martin, American physician and one of the founders of the American College of Surgeons; Gustav Lindenthal, American engineer; Lord Byng, the hero of Vimy Ridge; Admiral Jellicoe, British commander at the Battle of Jutland; Gen. Hunter Liggett, commander of the First Army of the American Expeditionary Forces; Col. T. E. Lawrence, romantic figure of the Arabian campaigns; De Wolf Hopper, much-married American comedian; Robert Loraine, British Shavian actor; Alexander Moissi, celebrated German actor; Adolph S. Ochs, editor and publisher of *The New York Times*; Louis Wiley, business manager of *The New York Times*; George Earle Buckle, editor of the *London Times*; Mikhail Ippolitov-Ivanov, Russian composer; Alban Berg, Austrian modernist composer; Marcella Sembrich, Polish-American operatic soprano; Herbert Witherspoon, American singer and newly-appointed manager of the Metropolitan Opera Association; Henri Barbusse, French radical author; Paul Bourget, a survivor of a French literary school; Edwin Arlington Robinson, American poet; George W. Russell, "A.E.", Irish mystical poet; Childe Hassam, American artist; Gaston Lachaise, Franco-American sculptor; Max Liebermann, dean of German painters; Will Rogers, American humorist; Col. Alfred Dreyfus, of the French *cause célèbre*; Gen. Adolphus Greely, American Arctic explorer; Annie S. Peck, American mountain climber; Gen. William W. Atterbury of the Pennsylvania Railroad; André Citroën, French "Henry Ford"; Edward L. Doheny, American oil baron; Carl Duisberg, German industrialist; Emile Francqui, Belgian banker and authority on international finance; Hugo Junkers, German aeronautical engineer; Sir Charles Edward Kingsford-Smith, Australian Trans-Pacific flyer; and Wiley Post, American aviator known for his globe-circling flights.

The Editor regrets to announce the retirement of MR. WILLIAM AGAR, who supplied the article on GEOLOGY and who has become headmaster of the Newman School, Lakewood, N. J.; MR. WILLIAM E. BERCHTOLD, who supplied the article on AERONAUTICS, and MISS MARY CLAPP, in charge of the BIOGRAPHICAL DEPARTMENT.

He takes pleasure in welcoming DR. GREGG DOUGHERTY of Princeton University, who has supplied the article on BIOLOGICAL CHEMISTRY; DR. PHILIP KRIEGER of Columbia University, who has developed GEOLOGY; MR. EDWARD P. WARNER, former Vice Chairman of the Federal Aviation Commission, who has treated the various phases of AERONAUTICS; and DR. BENJAMIN WERNE, Supervisor of Municipal Research, New York University School of Law, who has contributed an article on MEDICAL JURISPRUDENCE.

Appreciative thanks for obligation incurred and courtesies received are offered to the Officers of the various Departments of the United States Government and their allied Bureaus; also, to the Officers of those other Governments who have supplied much information concerning their respective countries; to MR. WILLIAM P. BANNING, of the American Telephone and Telegraph Company; and to each and every Association, Company, Corporation, or other Institution that has contributed material which will serve to maintain the high degree of accuracy required of this work.

For efficient aid in collaboration and correlation, and for watchful care in transcription in the various stages through which the work has passed, sincere thanks are tendered to my esteemed associate in editorial direction, HELEN READY BIRD, whose vigilance has maintained the standard of accuracy for which the NEW INTERNATIONAL YEAR BOOKS have long been noteworthy. In this work, she has been most ably aided by MR. HENRY E. VIZETELLY, and the CONTRIBUTORS and ASSOCIATE EDITORS in charge of the various departments that have made this work popular in every reference library, educational institution, newspaper office, and private home throughout the country.

FRANK H. VIZETELLY

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KEY TO PRONUNCIATION

ā	as in ale, fate. Also see ē, below.	ɒ	as in the Spanish Almodovar, pulgada, where it is nearly like th in English then, this.
ä	" " senate, chaotic.	g	" " go, get.
ā	" " glare, care, and as e in there. See ē, below.	g	" " the German Landtag, and ch in Feurbach, buch; where it is a guttural sound made with the back part of the tongue raised toward the soft palate, as in the sound made in clearing the throat.
ā	" " am, at.	h	" j in the Spanish Jijona, g in the Spanish gila; where it is a fricative somewhat resembling the sound of h in English hue or y in yet, but stronger.
ā	" " arm, father.	hw	" wh in which.
ā	" " ant, and final a in America, armada, etc. In rapid speech this vowel readily becomes more or less obscured and like the neutral vowel or a short u (ū).	k	" ch in the German ich, Albrecht, and g in the German Arensburg, Mecklenburg; where it is a fricative sound made between the tongue and the hard palate toward which the tongue is raised. It resembles the sound of h in hue, or y in yet; or the sound made by beginning to pronounce a k, but not completing the stoppage of the breath. The character x is also used to indicate the rough aspirates or fricatives of some of the Oriental languages, as of kh in the word Khan.
æ	" " final, regal, where it is of a neutral or obscure quality.	n	" " in sinker, longer.
æ	" " all, fall.	ng	" " sing, long.
æ	" " eve.	n	" " the French bon, Bourbon, and m in the French Étampes; where it is equivalent to a nasalizing of the preceding vowel. This effect is approximately produced by attempting to pronounce "onion" without touching the tip of the tongue to the roof of the mouth. The corresponding nasal of Portuguese is also indicated by ñ, as in the case of São Antão.
æ	" " elate, evade.	sh	" " shine, shut.
æ	" " end, pet. The characters ē, ā, and ä are used for d, ae in German, as in Baedeker, Gräfe, Handel, to the values of which they are the nearest English vowel sounds. The sound of Swedish a is also sometimes indicated by ē, sometimes by ä or d.	th	" " thrust, thin.
ē	" " fern, her, and as i in sir. Also for é, oe, in German, as in Gothe, Goethe, Ortel, Oertel, and for eu and oeu in French, as in Neufchâtel, Crêvecoeur; to which it is the nearest English vowel sound.	th	" " then, this.
é	" " agency, judgment, where it is of a neutral or obscure quality, ē.	zh	" z in azure, and s in pleasure.
ī	" " ice, quiet.		An apostrophe ['] is sometimes used to denote a glide or neutral connecting vowel, as in tā'b'l (table), kǎz'm (chasm).
ī	" " quiescent.		Otherwise than as noted above, the letters used in the respellings for pronunciation are to receive their ordinary English sounds.
ī	" " ill, fit.		When the pronunciation is sufficiently shown by indicating the accented syllables, this is done without respelling; as in the case of very common English and other words which are correctly accented. Pronunciation is discussed fully in THE NEW INTERNATIONAL ENCYCLOPÆDIA and in the NEW STANDARD DICTIONARY.
ō	" " old, sober.		
ō	" " obey, sobriety.		
ō	" " orb, nor.		
ō	" " odd, forest, not.		
o	" " atom, carol, where it has a neutral or obscure quality.		
oi	" " oil, boil, and for eu in German, as in Feuerbach.		
oo	" " food, fool, and as u in rude, rule.		
oo	" " foot, wool.		
ou	" " house, mouse.		
ū	" " use, mule.		
ū	" " unite.		
ū	" " cut, but.		
u	" " full, put, or as oo in foot, book. Also for u in German, as in Munchen, Muller, and u in French, as in Buchez, Budé; to which it approximates in English.		
ū	" " urn, burn.		
y	" " yet, yield.		
h	" " the Spanish Habana, Córdoba, where it is like a v made with the lips alone, instead of with the teeth and lips.		
ch	" " chair, cheese.		

THE NEW INTERNATIONAL YEAR BOOK

ABYSSINIA. See ETHIOPIA.

ACADEMIC FREEDOM. See EDUCATION IN THE UNITED STATES; UNIVERSITIES AND COLLEGES.

ACADEMY, FRENCH (ACADÉMIE FRANÇAISE). The oldest of the five academies which make up the Institute of France and officially considered the highest; founded in 1635, reorganized in 1816. The membership is limited to 40. At a meeting in the Louvre on June 18, 1935, the Academy celebrated its 300th anniversary. The French dictionary, begun on Nov. 5, 1885, was completed on Sept. 5, 1935. The list of the Immortals at the beginning of 1935, in order of their election, was as follows: Paul Bourget (q.v.), Gabriel Hanotaux, Henri Lavedan, Maurice Donnay, René Doumic; Marcel Prévost, Henri de Régnier, Henri Bergson, Mgr Alfred Baudrillart, Jules Cambon (q.v.), Henri Bordeaux, Joseph Bédier; André Chevrillon, Pierre de Nolhac, Georges Goyau, Edouard Estaunié, Henri Robert, Georges Lecomte, Émile Picard, Louis Bertrand, Auguste de Caumont, Duc de la Force; Paul Valéry; Abel Hermant, Émile Mâle; Louis Madelin, Maurice Paléologue, le maréchal Henri Pétain, André Chaumieux, Gen. Max Weygand; Pierre Benoit, Abel Bonnard, Lenôtre (L. T. T. Gosselin), François Mauriac, Maurice, Duc de Broglie; Léon Bérard, and le maréchal Louis Franchet d'Espèrey. At the meeting of the Academy on Mar. 28, 1935, Claude Farrière, marine officer and novelist, succeeded to the chair of Louis Barthou, Jacques Bainville, journalist, to that of Raymond Poincaré, and André Bellesort, editor and critic, to that of Abbé Brémond. At the meeting of Nov. 21, 1935, Georges Duhamel, the novelist, was elected to the chair of Georges Lenôtre, and Louis Gillet, art critic and authority on English and American literature, succeeded Paul-Albert Besnard. See PHILOLOGY, MODERN.

ACADEMY OF ARTS AND LETTERS, AMERICAN. A society founded in 1904 by members of the National Institute of Arts and Letters for the purpose of furthering and representing the interests of literature, painting, sculpture, architecture, and music. Its membership is limited to 50 chairs, vacancies caused by death being filled by election from the membership of the Institute.

The membership of the academy as of Nov. 14, 1935, consisted of the following in the order of their election: Robert Underwood Johnson, Edwin Howland Blashfield, George de Forest Brush, Bliss Perry, Abbot Lawrence Lowell, Nicholas Murray Butler, Owen Wister, Herbert Adams, Robert Grant, Frederick MacMonnies, William Gillette, Paul Elmer More, Elihu Root, Hamlin

Garland, Archer Milton Huntington, Lorado Taft, Newton Booth Tarkington, Charles Dana Gibson, Royal Cortissoz, Henry Hadley, Charles Downer Hazen, Wilbur L. Cross, Herman A. MacNeil, John Russell Pope, James Earle Fraser, John Huston Finley, William Mitchell Kendall, Edwin Markham, Robert Frost, James Truslow Adams, Edith Wharton, George Grey Barnard, William Lyon Phelps, Adolph Alexander Weinman, Walter Damrosch, Anna Hyatt Huntington, Paulanship, Cecilia Beaux, Eugene O'Neill, William James Henderson, Henry Dwight Sedgwick, Walter Gay, and Walter Lippmann.

At the annual meeting, Nov. 14, 1935, Frederick J. E. Woodbridge, M. A. DeWolfe Howe, Frank J. Mather, Jr., Stewart Edward White, Deems Taylor and Sidney Howard were elected to membership.

Agnes Repplier, member of the National Institute of Arts and Letters, delivered the sixteenth address on the Evangeline Wilbour Blashfield Foundation in commemoration of the Horatianum Bimillennium. In connection with the six months' exhibition of the paintings of Cecilia Beaux there occurred the opening for the second season of the permanent Museum of the Academy and the Institute. This year the Museum features a special Mark Twain Exhibit and for the first time in America an exhibition of the Brand Whitlock Collection.

An Orchestral Concert was given on the evening of November 15 by Members of the Philharmonic Orchestra, Henry Hadley, member of the Academy, conducting. This is the eighth of a series of Concerts of American Music by American Composers.

The Howells Medal for Fiction was awarded on November 14 to Pearl S. Buck for her novel *The Good Earth*. Miss Lynn Fontanne was the recipient of the Academy's medal for Good Diction on the Stage and Mr. Alois Havrilla of the National Broadcasting Company received the medal for Good Diction on the Radio.

The officers of the academy in 1935 were: President, Nicholas Murray Butler, chancellor and treasurer, Wilbur L. Cross, secretary, Robert Underwood Johnson, directors, Herbert Adams, Royal Cortissoz, Charles Dana Gibson, Robert Grant, William Lyon Phelps, Archer Milton Huntington. Administrative offices are at 633 West 155th Street, New York City.

ACCIDENTS. See AERONAUTICS; MARINE DISASTERS; RAILWAY ACCIDENTS; WORKMEN'S COMPENSATION.

ADDAMS, JANE. An American sociologist, died in Chicago, May 21. Born at Cedarville, Ill., Sept. 6, 1860, she graduated from the Rockford

Female Seminary in 1881, and later attended the Philadelphia Medical School, but illness caused her to leave at the end of a year. Upon regaining her health she went to Europe and traveled extensively in France, Italy, Germany, Switzerland, Spain, and England, where she became interested in the living conditions of the poor. Finding the slums so horrible she determined to devote herself to the work of alleviating the sufferings of the poor. With this end in view she returned to America, and with Miss Ellen G. Starr, sought a house in Chicago in which to begin her work. The Hull mansion which, when originally built, had stood on the outskirts of the city, was then in a congested neighborhood, and so was found to be satisfactory.

With the aid of several young women, Hull-House was opened to the public in 1889. A centre was formed through which the workers could fraternize with the immigrants in the neighborhood, first by social calls, later by cooking classes, debates, and by summer outings. Out of these activities grew Hull-House, the first social settlement in the United States, with Miss Addams at its head as worker and guiding spirit. In 1894 the House was incorporated and its purpose, as stated in its charter, was "to provide a centre for the higher civic and social life; to institute and maintain educational and philanthropic enterprises and to investigate and improve conditions in the industrial districts of Chicago."

The old Hull mansion was quickly outgrown and a succession of buildings was added. These include a gymnasium, an art gallery, various club houses, the labor museum, a theatre, and workshops where handicrafts and trades were taught. Part of the outlay for the support of the establishment was met by rents, fees, and a small endowment; the other part obtained through contributions of the public.

The work done by Miss Addams led her into the labor movement and soon Hull-House was the centre of civic reform. It was here that the shirt-makers and cloak-makers found sympathy in their efforts to organize against the sweatshop, and it was through the conciliatory measures of Miss Addams that the Pullman strike of 1894 was arbitrated and settled, and led to the demand for the establishment of a State board of arbitration. The leaders of Hull-House agitated for a juvenile court, the exclusion of politics from the city's sanitary bureau, the opening of playgrounds, vacation schools, and the promotion of industrial education. The U. S. Department of Labor's investigation of Chicago slums was begun at Hull-House, and led to the demand for the model tenement code established by the city.

Miss Addams had less sympathy with theoretical studies of social problems than with everyday experience with all sorts and conditions of people. Her practical common sense, great executive ability, and fine unselfish spirit made her the natural leader of the settlement movement in this country. She took an active interest in city administrative problems and served for three years as inspector of streets and alleys in the district around Hull-House.

Always an opponent of war, Miss Addams was interested in the various peace movements, and in January, 1915, at the formation of the Woman's Peace Party, she was chosen president. Three months later she helped to organize and became president of the Woman's International Peace Congress, later known as the Woman's International League for Peace. She held the office of president until 1929, when she became honorary

international president. The first Congress of the League was held at The Hague in 1915, and after it ended, Miss Addams tried to interest the rulers of Europe in a peace programme, but without success. Even after the entry of the United States into the World War she did not stop denouncing war and as a result was criticized by many for what they deemed lack of patriotism.

In 1931, Miss Addams, in conjunction with Dr. Nicholas Murray Butler, the president of Columbia University, received the Nobel Prize for peace. In conferring the award, Prof. Halfdan Korth said: "Miss Addams does not speak much, but her quiet, kind-hearted personality creates an atmosphere of good-will which instinctively calls forth the best in us." The universities of Yale, Wisconsin, and Chicago recognized her achievements with honorary degrees, and in 1931 she was awarded the M. Carey Thomas prize of \$5000 given by Bryn Mawr College, "to an American woman in recognition of eminent achievements." In this same year, *Pictorial Review* gave her its annual \$5000 achievement award, and a jury selected by *Good House-keeping* named her as one of the nation's 12 greatest women. On May 2, 1935, a dinner was held in her honor by the Women's International League for Peace. This was attended by Harold L. Ickes, Secretary of the U. S. Department of the Interior, who availed himself of this occasion to speak of Miss Addams in the highest terms, and said in part, "Miss Addams does not talk about the Christian virtues, she practices them. She does not find it in her comprehending heart to preach; she lives in gracious fellowship and human understanding with persons of all races, of all colors, of all creeds."

Besides being a frequent contributor to newspapers and periodicals on social questions of the day, Miss Addams wrote: *Democracy and Social Ethics* (1902); *New Ideals of Peace* (1907); *The Spirit of Youth and the City Streets* (1909); *Twenty Years at Hull-House* (1910); *A New Conscience and an Ancient Evil* (1911); *The Long Road of Women's Memory* (1916); *Peace and Bread in Time of War* (1922); *The Second Twenty Years at Hull-House* (1930); *The Excellent Becomes the Permanent* (1932); *My Friend, Julia Lathrop* (published posthumously in 1935).

ADELPHI COLLEGE. A nonsectarian college of liberal arts for women located in Garden City, New York, incorporated in 1896. Adelphi was located in Brooklyn, New York, until the autumn of 1929 when it moved to its new home in Garden City, where it has a campus of about 70 acres and three buildings. The enrollment for the autumn term of 1935 was 404 and for the summer session of 1935 was 47. The faculty numbered 33. The endowment was \$894,540, while the income for 1934-35 was \$162,481. The Library contained 35,200 volumes. Courses in Art, Music, Dramatic Art, Business Administration and Social Service were added to the curriculum in the fall of 1935. President, Frank Dickinson Blodgett, LL.D.

ADEN, a'den; a'den. A British fortified seaport and peninsula in southwest Arabia. Area of the peninsula, 75 sq. miles; including Aden Protectorate and the Hadramaut (under loose British control), 42,000 sq. miles; the island of Perim, 5 sq. miles. Population of Aden and Perim, 51,478 (1931 census).

Production and Trade. Aden is a free port and the chief commercial centre for the Arabian peninsula. It is primarily a transshipment port and produces little itself aside from the manufacture

of salt, cigarettes, and dhow building. During 1933-34, total imports were valued at Rs53,283,625 and included fuel oil, gasoline, kerosene, cotton piece goods, gums, hides and skins, grains, coffee, tobacco, fruits, vegetables, etc.; total exports, Rs35,203,008 (including treasure, Rs3,023,269), the items being the same as those for imports given above. Merchant ships entering the port in 1933-34 aggregated 6,367,139 net tons; local craft entered in the same year totaled 43,630 tons.

Government. For 1933-44, total revenue amounted to Rs1,073,625; expenditure, Rs1,128,977 (rupee averaged \$0.3788 paper for 1934). Aden was made a separate province of India under a chief commissioner (from Apr. 1, 1932). The Aden Protectorate is controlled by the British Colonial Office in London by the Chief Commissioner and Commander-in-Chief of Aden (in 1935, Lieut.-Col. Sir Bernard Reilly who was succeeded by Lieut.-Col. M. C. Lake).

ADULT EDUCATION, AMERICAN ASSOCIATION FOR. An organization founded in 1926 to serve as a national clearing house of information concerning adult education activities.

Funds supplied by the Carnegie Corporation of New York and the General Education Board have been used for continuing cooperative relations with the United States Office of Education in respect to the emergency educational programme of the Federal government (see pages 2 and 3 of *THE NEW INTERNATIONAL YEAR BOOK* for 1934). The Carnegie Corporation of New York has been the chief source of funds for other studies and demonstrations.

The current programme of demonstrations includes forums for adults conducted experimentally at Des Moines, Iowa, Springfield, Massachusetts, and Hartford, Connecticut, an Institute of Rural Economics at Rutgers University; programmes designed to strengthen the community approach to adult education in New England, California, Denver, New York City, and Leona, New Jersey; field service for these and similar groups; experiments in the training of leaders at Teachers College, Columbia University, and the Division of General Graduate Studies, Yale University; an experimental programme for youth conducted by the Civic Federation of Dallas; work with little theatre and similar groups through the National Theatre Conference; and programmes for the physically handicapped through the Saranac Lake Study and Craft Guild. Studies in progress relate to the simplification of printed materials for adults of limited education; the place of music in adult education; the place of science in adult education; the abilities of adults as exemplified by students in university extension classes; case histories of adult students (with the British Institute of Adult Education); and needed research in adult education. Here also should be mentioned two books now in preparation: revision of the *Handbook of Adult Education* (first issued in 1934) and a volume of readings designed to illustrate all aspects of adult education with particular reference to the United States.

The most important publications issued or sponsored by the association in 1935 were: *Ten Years of Adult Education*, by Morse A. Cartwright; *Adult Interests*, by E. L. Thorndike; *The American Way*, by John W. Studebaker; *Science and the Public Mind*, by Benjamin C. Gruenberg; *What Makes a Book Readable?* by William S. Gray and Bernice E. Leary; *The School in the Camps*, by Frank Ernest Hill; *Aspects of Post-*

Collegiate Education, by Ralph A. Beals. Twelve pamphlets on the Adjustment Service of New York. The *Journal of Adult Education* was published four times a year.

At the tenth annual meeting of the association, the following officers were elected: Charles A. Beard, president; James E. Russell, chairman; Everett D. Martin, Remsen D. Bird, Harvey N. Davis, Matthew S. Dudgeon, Alain Locke, William A. Neilson, John W. Studebaker, and George F. Zook, vice-presidents; Jennie M. Flexner, secretary; and Harold Stonier, treasurer. Headquarters: 60 East Forty-second St., New York City.

ADVANCEMENT OF SCIENCE, AMERICAN ASSOCIATION FOR THE. An organization founded in 1848 to advance science, to give a stronger and more general impulse and systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness. On Sept. 30, 1935, its membership included 17,937 cooperating individuals. As a general association of the numerous American societies for the advancement of the special sciences, it consisted of 152 autonomous and independent associated scientific societies, of which 109 were officially affiliated with the association, 29 being local academies of science. Its various sections represented the main current subdivisions of science: Mathematics, physics, chemistry, astronomy, geology and geography, zoological sciences, botanical sciences, anthropology, psychology, social and economic sciences, historical and philological sciences, engineering, medical sciences, agriculture, and education.

The association holds two meetings during the year, one in the summer and the regular annual meeting in December. By invitation of the University of Minnesota, the last summer meeting was held in Minneapolis, Minn., June 24 to 29, 1935, with an attendance of about 1100. This meeting was the ninety-sixth meeting. The next meeting, the ninety-seventh, was held in St. Louis, Mo., Dec. 30, 1935, to Jan. 4, 1936, by invitation of the Washington University, the St. Louis University, and the Academy of Science of St. Louis. The registered attendance was about 2300. Some 40 affiliated and associated organizations met with the association in connection with the St. Louis meeting.

Of the 1200 papers presented at the section meetings, the prize of \$1000 for one describing a noteworthy contribution to science was awarded to Dr. P. W. Zimmerman and Dr. A. E. Hitchcock of the Boyce Thompson Institute for Plant Research, for "Responses of Plants to Synthetic Growth Substances (Phyto-Hormones)."

The official organ of the association is a weekly journal, *Science*. In addition it issues the *Scientific Monthly*, an illustrated magazine of timely articles of general interest by eminent men of science. The permanent endowment of the association, the income from which is employed to advance scientific research, amounted on Sept. 30, 1935, to about \$206,000.

The president of the association for 1935 was Karl T. Compton, president of Massachusetts Institute of Technology. The president-elect for 1936 was E. G. Conklin, Princeton University. The other officers were Permanent secretary, Henry B. Ward; general secretary, Otis W. Caldwell; and treasurer, John L. Wirt. Headquarters are in the Smithsonian Institution Building, Washington, D. C.

ADVENTISTS. In America the Advent Movement owed its origin to William Miller (1782-

1849), who from 1831 taught not only that Christ was coming in person, power, and glory, but that such an advent was at hand and that the date might be fixed with some definiteness. For the early history of the Advent Movement see THE NEW INTERNATIONAL ENCYCLOPEDIA, vol. i, p. 158 ff.

Advent Christian Church. This Church holds simply to the general imminence of Christ's return but takes the position that the day cannot be determined. Headquarters of the general conference are at 160 Warren Street, Boston, Mass.

Seventh-Day Adventists. This denomination, which is the largest of the Adventist group, embraces nine union conferences in the United States and Canada. It believes that the seventh day of the week, from sunset on Friday to sunset on Saturday, is the Sabbath established by God's law and that immersion is the only proper form of baptism.

On the basis of Biblical prophecy, including the prophecy of Christ himself, it teaches the imminence of Christ's second coming, and the end of this present world. The statistical report of the denomination for 1934 indicated 2375 churches in the North American division, 1026 ordained ministers, and 151,216 church members; Sabbath schools, which numbered 2922, had a membership of 146,179.

The foreign divisions, including the Australasian, Central European, Chinese, Far Eastern, Inter-American, Northern European, Southern African, South American, Southern Asia, Southern European, and Union of Soviet Socialist Republics divisions, consisted of 5543 churches, 1272 ordained ministers, 253,293 church members, and 9045 Sabbath schools with an enrollment of 344,888. Throughout the world there was an increase in membership of 20,358 over 1933. The work was conducted in 325 countries and islands by 70 union conferences, 144 local conferences, and 318 mission field organizations, employing 23,753 evangelistic and institutional laborers.

The denomination maintains in the United States and Canada 109 educational institutions, which in 1934 had an enrollment of 15,536 students. There also are maintained in foreign countries 105 educational institutions with an enrollment of 9641 students. The denomination has 17 publishing houses in North America and 52 in other countries. The principal periodicals are the *Advent Review and Sabbath Herald* and *Signs of the Times*. Total contributions from all sources in 1934 amounted to \$6,242,556.35 for the North American division, and \$3,650,658.32 for the other divisions. The headquarters of the general conference are at Takoma Park, Washington, D. C.

ÆGEAN ISLANDS, ITALIAN. The Ægean islands of Rhodes (Rodi), Castelrosso, and the Dodecanese group (12 islands). Total area, 977 sq miles, population (1933), 134,384 compared with 131,255 (1931). The 1931 population was 83 per cent Greek, 7 per cent Turkish, 5 per cent Italian, and 5 per cent Jewish. Chief towns: Rhodes (Rodi), the capital, 25,447 inhabitants; Kalymnos (Calmo), 16,512; Cos (Coo), 11,571; Symi (Simi), 9462.

Production and Trade. Grapes, olives, tobacco, oranges, and vegetables were the main agricultural products. The important industries were the manufacture of wine, olive oil, artistic pottery, tiles, and oriental rugs. Sponge fishing was an important occupation. In 1933, imports were valued at 48,000,000 lire, exports, 15,000,000 lire (lira averaged \$0.0667 for 1933).

Government. For 1933-34 the budget of 68,000,000 lire included a state contribution of 3,000,000 lire. A governor, who was under the Italian Foreign Office in Rome, headed the administration. Governor in 1935, Senator Mario Lago.

History. Because of their strategic importance as a base for Italian expansion in Asia Minor, the Turks considered Italian occupation and fortification of the islands as a perpetual menace to their security. With the development of the Anglo-Italian crisis in 1935 and the entrance of the British fleet into the Mediterranean, the Turkish government early in October offered the British the aid of their fleet and the use of Turkish ports in case of war. In return they asked that the six fortified islands in the Dodecanese group nearest the Turkish shore be restored to Turkey. It was understood that, if Italy was defeated, the remainder would go to Greece. The Italians during 1935 displayed great activity in the islands, strengthening their fortifications, increasing their armed forces, improving the naval base at Leros, and storing war supplies on Rhodes. Extensive hospital facilities were erected on Rhodes and many of those wounded or stricken with disease during the campaign in Ethiopia (qv) were taken there. See GREAT BRITAIN, GREECE, ITALY, and TURKEY under *History*.

AËRIAL PHOTOGRAPHY. See PHOTOGRAPHY.

AËRONAUTICS. Of the noteworthy aeronautical events of 1935, a considerable majority took place on the ground. Dramatic adventure was not lacking from the record, but memorable flights have a relatively small place in it. The major place is reserved for the record of government policy, of progress in design, and of fruition of plans long worked on in secret for the opening of new air routes.

For various reasons, the most important deriving from the prevalence of war clouds over Europe, the aviation boom that had been so catastrophically terminated in 1929 was reborn. Unemployment among skilled aircraft workers was unknown. Engineering schools, fortunate if they could find aeronautical employment for a quarter of their aeronautical graduates three years ago, found themselves unable to meet the demand for technically-trained men. The stocks of aviation companies took place among the leaders, both in volume of transactions and in rapidity of rise of price, of a speculative boom on both the New York and the London exchanges. The total production of aircraft and engines for the year probably exceeded that of any other peace-time year except 1929, and the indications at the end of 1935 were plain that 1936 would easily surpass the 1929 record.

Air Transport. The cancellation of the air mail contracts, in February, 1934, still casts a shadow over American domestic transport operations. The atmosphere of instability that the cancellation left was to have been abated by the report of the Federal Aviation Commission, created by law for the definition of a general air policy for the Federal government, and the anticipated acceptance and execution of its recommendations. It proved rather to be enhanced, when the Commission's extensive review of the problem and its one hundred-odd recommendations for dealing with it were casually and almost contemptuously dismissed by the President and the Congress. In the President's case the dismissal took the form of a special message serving warning on the operators of air transport that so long as they were



Underwood

EXPLORER II

The U S Army Air Corps-National Geographic Society balloon that reached a new world's altitude record of 72,395 ft on Nov. 11, 1935

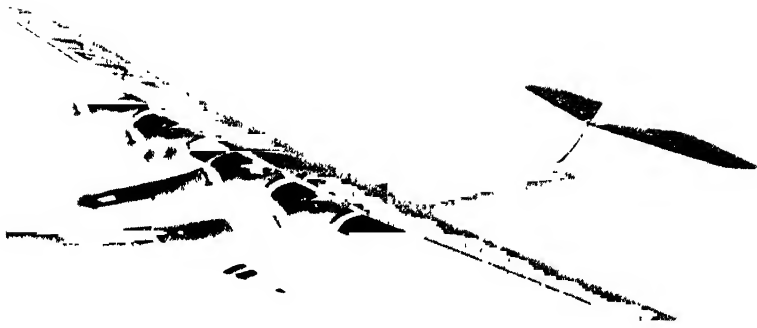


Keystone

GERMAN VÉROPLANE SQUADRON

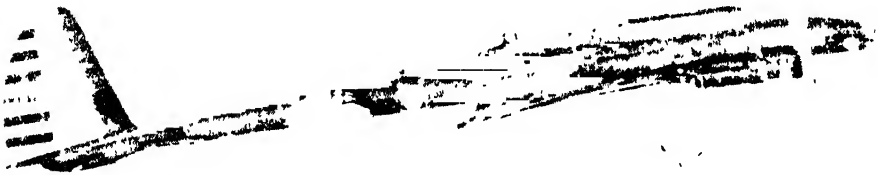
Parade of aeroplanes on the Oberwiesenfeld near Munich, Germany, waiting to take part in the Zugspitze flight contest, postponed by bad weather

AÉRONAUTICS



THE CHINA CLIPPER

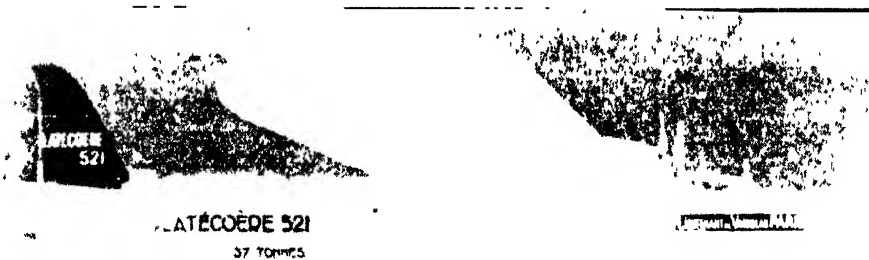
Built for the Pan American Airways' transpacific service, it started its first flight from Alameda, Calif., Nov. 11, 1935, reaching Manila in the Philippines, Nov. 29, 1935



U S Army Signal Corps Pictorial Service

UNITED STATES ARMY AEROPLANE

A model of the latest type Boeing bombing plane ordered by the United States Government



European

FRENCH SEAPLANE

The *Lieutenant de Vaisseau Paris*, 37-ton Latécoère Hispano-Suiza transport with six engines of 900 horse power (French), which made a transatlantic flight in December, 1935

receiving assistance from the government "any profits at all by such companies should be a secondary consideration."

The Commission, conducting approximately the twenty-fifth investigation of American aviation since the war, had concluded that air transport should have governmental recognition as a department of commerce by no means limited in significance to its rapid carriage of the mails, and that it should be emancipated from an exclusive Post-office control and put under the dominion of some agency of less habitually partisan administration and with a broader point of view. Though the Post Office Department naturally opposed that recommendation, and though the concealment of a direct financial grant in aid of transport operation under the guise of a "mail contract" continues to be a feature of American air policy as of merchant marine policy, the year nevertheless brought a certain attenuation of postal control over air transport. The Interstate Commerce Commission was definitely given the power either to raise or to lower established rates of payment under existing mail contracts. The same legislation, the Mead-McKellar Air Mail Act, required that the Commission maintain a minute watch over the air lines' operations, with special reference to expenditures that might be considered unnecessary or extravagant, and subjected the further extension of the air transport map and the development of any new inter-line competition to a Commission veto. Henceforth, new services can be initiated only with ICC approval. The Post Office Department has challenged the interpretation of the law upon almost every occasion of attempted use by the Commission of its newly-acquired powers, but so far unsuccessfully.

Increased Traffic. Despite all these confusions, which might well have been disastrous if they had been encountered three years earlier, air transport's progress has been steady and its operating record has continued to improve. Political turmoil intervened just as travel by air was beginning to gain wide public acceptance, and failed to check its growing popularity. During the summer of 1935 the number of daily air schedules between New York and Chicago reached 19 in each direction. The total number of passengers carried on the domestic air lines during the year increased about 65 per cent over any previous year, to a total of 746,946, while the total service in terms of passenger-miles rose by about the same fraction, to a little under 300,000,000 passenger miles per year. The total traffic including the foreign lines under American registry was nearly 350,000,000 passenger miles (exact and final figures on the year's traffic not being available at the time of writing). Express business increased in even larger proportion than that with passengers, but remains comparatively insignificant in magnitude, the contributions of passengers and express to air-line revenue being approximately in the ratio of 20 to 1. Prospects for further increase in express volume were bright, as the result of the final formation of a truly national air express system in place of the two incomplete and imperfectly cooperating systems heretofore available. By the end of the year all of the domestic air lines except Transcontinental and Western Air had ratified an operating agreement under the leadership of the Railway Express Agency.

Passenger traffic was highly seasonal, as usual, air travel in summer still being both pleasanter

and more certain of on-time arrival than during the storms of winter. In August the total domestic traffic rose to over 35,000,000 passenger-miles, the mail movement to 750,000,000 pound-miles, the latter exceeding by 25 per cent the record figure for any month previous to 1935. European lines also showed general improvement in traffic over previous years. Imperial Airways, for example, was up about 30 per cent, but the year's total for all British lines still fell below the best single month for the American lines, and the total of American traffic for the year remained substantially equal to the total for the rest of the world.

Air-Line Coordination. In the field of policy the formation of a unified express service was a particular example of a generally increasing willingness to cooperate. Near the end of the year the American air transport lines unanimously withdrew from the Aeronautical Chamber of Commerce, and formed a new trade association of their own. The first act of the new association was the establishment of an all-inclusive scrip plan, whereunder mileage books sold by any line became interchangeably usable for travel on all other lines. A still more spectacular announcement, a bit later, related to a common development programme with a number of the leading transport operators pooling their efforts to sponsor the design of new large aeroplanes that would be suitable for all of them to use.

The material of domestic air travel and its operating methods underwent no very important changes. The domination of the nation's air routes by twin-engined low-wing all metal monoplanes bearing the names of Douglas, Boeing, and Lockheed became progressively more complete, and at the end of the year the most recent models of those three manufacturers accounted for more than 80 per cent of all transport operation. The first example of a new and somewhat enlarged Douglas with special provision for sleeper service was completed in December, and plans were being made for a general replacement of twin-engined by four-engined aeroplanes at some time during 1937 or 1938.

Methods of operation and navigation were refined in detail but showed no fundamental alteration during the year. During the autumn and winter, attention began to be concentrated on collision hazard in the neighborhood of the largest cities where the arrival of transport planes at intervals of 5 or 10 minutes created a bad-weather traffic problem of serious dimensions. Ordinary private owners had to be forbidden to use the air routes in bad weather as a first step towards eliminating the danger, and a traffic controller was established at Newark Airport (New York's air terminal) to keep track of the exact position of all nearby aircraft, and to instruct them by radio in manoeuvring to keep well away from each other.

Air Transport Safety. The safety record on the transport lines was beyond all precedent, with a total of fifteen passenger fatalities, or more than 20,000,000 passenger-miles for each one. The fact that one of the two major accidents of the year included Senator Bronson Cutting (q.v.) among its victims, however, was responsible for starting still another of the long series of aviation investigations. Under the chairmanship of Senator Cope-land, the investigating committee spent six months collecting data, planned to hold open sessions early in 1936 on the general subject of what derelictions might have entered into transport operation and

what government policies might serve to make it safer.

European lines, on the other hand, had a very bad year. Imperial Airways, with an admirable safety record of long standing (though never quite equal to that established on the American routes over the last five years), was particularly unfortunate in losing a number of aeroplanes, some of them with loss of life. The most spectacular of European crashes, however, was non-transport. It was the outcome of a stunting display by a young Russian pilot who finally dove into a collision with the *Maxim Gorki*, world's largest aeroplane (210-ft. wing span, 100,000 lb. weight). Its 49 occupants lost their lives.

Trans-Oceanic Air Service. The most important transport developments of the year, as well as the most dramatic, were outside the United States. They were on the high-seas air routes. Pursuant to plans first organized in 1931, Pan American Airways sent a supply ship out into the Pacific to establish bases on the hitherto completely deserted reef of Wake and the almost equally unfamiliar one at Midway, as well as at better-known and well-populated Guam. The *North Haven* at home again, after having boated through the surf at those remote atolls the components of a cargo that included everything from a complete Diesel-engine-operated electric-light plant for each base to a ping-pong table for the relaxation of the personnel, flying boats began to feel a cautious way out along the line of milestones just planted. A succession of flights extending gradually farther from the California coast paved the way for the letting of a contract for trans-Pacific air mail by the Post Office Department in the late summer, and for the actual opening of mail service between California and the Philippines in mid-November. Passenger service over the same route waits only upon the completion of hotels for overnight accommodation upon a reef that a year before had been recorded on charts only to warn navigators away from its inhospitably breaker-lashed bounds.

On the western terminus of the Pacific route, half a dozen nations narrowed their convergent gaze. Japan manoeuvred to prevent Caucasian domination of far-Eastern routes. British Imperial Airways, Dutch Koninklijke Luchtvaart Maatschappij, better known to travelers as KLM, and Parisian Air France all schemed over possible routes that would rationally extend their present Asiatic services to connect with Pan American's trans-Pacific. Pan American itself planned for projection across the Sea of China to Portuguese Macao, to connect there with the European lines.

Pan American laid plans also for another approach to the Orient, by way of Australasia. Islands offering re-fueling base possibilities to the south-west of Hawaii were surveyed, and on November 23d an agreement giving Pan American the privilege of entry into New Zealand was signed. Direct service between the United States and New Zealand was promised within the next 18 months.

The aircraft used across the Pacific are monoplane flying boats, each with four engines. Generically known as Clippers, they are the product of the Martin factory in Baltimore. With a loaded weight of over 50,000 lb. and with an almost unprecedentedly high ratio of useful load to total weight, they exceed in size any aeroplanes of any type previously built in the United States. With a normal cruising speed of better than 160 miles per hour, although they throttle back to considerably less than that over very long distances, they

are designed to accommodate a ton or more of mail and a number of passengers on flights up to 2500 miles in length. Sikorsky Clippers of 20 per cent less gross weight, and shorter maximum range, had a share in pioneering the Pacific run before the Martins became available.

While the foresight of American voyagers and Naval officers who planted the American flag a generation or two ago on various of these scattered eruptions of coral rock in mid-Pacific permitted Pan American to reach the Philippines without making a stop elsewhere than on American soil, European governments and transport companies continued their rivalry on other oceans and along routes that carried them through the territories of many nations. The Dutch service to the East Indies, with its terminus in Sumatra, was stepped up to a twice-weekly departure from Holland during the summer. The French improved the organization of their regular line to Indo-China, and Imperial Airways, in addition to reducing the maintenance of the Anglo-Australian service to routine, inaugurated in November an experimental and intermittent line from Penang, near Singapore, to Hong Kong. On the South Atlantic the Germans continued to maintain a weekly operation by flying boats with a progressively diminishing dependence on mid-ocean refuelling from mother ships, and the Graf Zeppelin maintained the undisturbed regularity of its own trips between Friedrichshafen and Brazil. The Zeppelin service proved so popular with passengers as to be consistently sold out a number of weeks in advance. The French progressed towards complete emancipation from the torpedo boats that had for a number of years been carrying the air mail between West Africa and the easternmost projection of Brazil. Thirty-one crossings of the south Atlantic were made by French transport aircraft up to November 1st, and the record time of transmission of the mail between Paris and Buenos Aires was set in June at 66 hours 29 minutes.

On the north Atlantic political problems continued more serious than technical ones. Though an all-British service between Canada and Ireland is theoretically possible during the summer months, it would almost inevitably be seasonal in nature. For year-round operation with aeroplanes of present capacity it seems inevitable that the Azores be available as a stopping place, and it is of course commercially essential that such service have a direct entry to the United States. International agreement is then a prior condition of trans-Atlantic transport. It has been very slow in arriving, but during November, which was also the month of the opening of the trans-Pacific service and perhaps the most significant month in the entire history of world air transport up to this time, a British Empire delegation reached Washington to seek agreement on trans-Atlantic conditions. Agreement in general terms was attained, and the inauguration of a service which will make air transport literally world-wide and will allow the ordinary traveler to circumnavigate by purely commercial services in no more than 14 days seems now to wait only upon the completion of British aircraft technically qualified to do in the Atlantic what Pan American's Clippers would already be prepared to undertake. Another three years at most ought to see the launching of 36-hour service between New York and London.

While Pan American made progress across both oceans, it ran into trouble nearer home. Developing nationalism in Mexico produced an edict that

Mexican pilots must henceforth be used between Mexico City and Los Angeles. At first indignantly opposed by the air line, even in the face of a threatened withdrawal of the right to operate, it was finally accepted as affecting one of the two occupants of each cockpit.

New Aéroplane Designs. The oceans have been the domain of the giant flying boat. Both in the United States and Great Britain present plans extend up to the construction of machines of 100,000 lb. gross weight or more, while the French have actually shown the way into a region well beyond Pan American Clipper dimensions by building the *Lieut.-de-vaisseau Paris*, with six engines, a wing span of 160 feet, and a weight of 83,000 lb. That craft first flew in January, crossed the Atlantic in December, and was unfortunately wrecked by storm while at anchor in Pensacola harbor in January, 1936. In the manner characteristic of European flying boats, its speed was considerably below prevailing American standards. It cruised at 133 m.p.h.

Transport land planes also tend toward increased size. For several years the maximum on American routes has been about a 16-passenger capacity, while Imperial Airways was running 40-passenger Handley Page biplanes across the English Channel. Forty-passenger capacity seems likely to be a rather general rule on all routes with enough traffic to permit it within the next two or three years. Orders have been placed by both British and French air lines for new types of that size or even larger for overland use, while experimental work of the same order has gone forward in America.

At the same time there has been a substantial development of smaller transport equipment. Several American manufacturers have produced new high-speed machines with twin engines and carrying from 6 to 8 passengers, for use on feeder lines of light traffic, so invading a field of design that had been almost exclusively British. Most noteworthy European trend of the year among smaller transports has been a quest for speeds approaching those so eloquently displayed to European operators and manufacturers by the American machines imported for use on Swiss Air and other European lines and by those that flew in the MacRobertson race to Australia in the previous year. The Douglas Company alone had more than 20 of its aeroplanes in service on European air lines by the end of 1935, and a number of European manufacturers had produced models strongly suggestive of the Douglas in appearance,—the product of a state of mind lightly described as "Douglas-terria" that followed the Douglas accomplishment of flying a regular passenger-loaded transport into second place, immediately behind a specially-built two-passenger racing machine, in the MacRobertson contest. Three British firms brought out during 1935 transports of their own design carrying from 10 to 14 passengers at 190 miles per hour or better, while some of the new French products reported speeds well above 200. The disposition to higher speed showed itself also in still smaller aircraft of British manufacture. As American builders invaded the six-seater field which had always been a British specialty, so England encroached on what was hitherto a virtual American monopoly in four-seaters suitable for private use. Striking British aeroplanes of the year included the Miles Falcon, which used only 200 h.p. to carry four passengers at a speed of 180 miles an hour or higher and which captured the King's Cup, the clas-

sic of British air racing. It was in a Percival Gull, a three-passenger machine of almost equally high speed, that Miss Jean Batten, a New Zealand girl already well known for long distance flights, made the first solo crossing of the south Atlantic by a woman. Accomplished near the end of the year, her flight took her from England to Brazil in 61 hours and 15 minutes, including a crossing from Africa to South America in the record time of 13 hours and 15 minutes.

Most remarkable concept of the year, however, was the composite aeroplane designed by Mr. R. H. Mayo and built by Short Brothers in England for Imperial Airways. It was a combination of two aeroplanes in one, with the purpose of using the larger of the two merely as a device to aid the smaller and faster in getting into the air with a great load of fuel. The two would be clamped together, with the smaller machine held above the wing of the larger one, until the combined thrust of their combined power plants raised them from the water, and the smaller unit would then be uncoupled to proceed to its remote destination. Despite the eminence of its sponsorship, the scheme appeared to most engineers as of questionable practicability, and as at best a somewhat uncertain and extremely expensive substitute for a catapulting device to assist in launching.

Turning from individual designs to general trends, the monoplane continued and even extended its ascendancy. Even in England, where the biplane has found its staunchest advocates, a majority of the new aircraft of the year, both of the military and commercial groups, were monoplanes. All-metal construction, with most of the strength in the aluminum-alloy skin of wings and body, made further progress towards becoming a world standard.

Private-Owner Aeroplanes. Aside from the Clippers already mentioned, and certain military aeroplanes, the year's most notable innovations in the United States were certain small machines built under the sponsorship and at the cost of the Department of Commerce, with the announced intention of stimulating private flying by making it at once cheaper and easier. The first new machines that were produced under the Department of Commerce's programme failed to arouse any great enthusiasm, but germinated a violent controversy over the propriety of the Government's incursion into the direct stimulation of new commercial designs and over the degree of intelligence with which the actual efforts along that line were being directed. Mr. Vidal, Director of Air Commerce, aspired to expand the market for the aircraft industry's products out of all semblance to its present magnitude, but the industry as a whole remained persistently skeptical of the value of his help. There was general agreement that one beneficial result had been forthcoming in the concentration of attention upon a new type of landing gear, with a small wheel forward and the two principal wheels aft of the centre of the body, in substitution for the reverse arrangement that has long been standard. The new type of landing gear, dubbed "tricycle," appeared on all the Department of Commerce's private ownership types, and there was wide agreement that it made landing of an aeroplane much easier for the inexperienced, and greatly diminished the amount of skill required in judging the approach to the ground. More skeptically received were attempts to convert automobile engines for aircraft service and an effort to produce an aircraft capable of folding its wings and being

driven along the highway as an automobile after landing. The tricycle landing gear was attracting attention in Europe as well as in the United States, the French Nieuport firm having incorporated it in a three-passenger plane produced during the year.

Despite all efforts of the Department of Commerce, the total volume of private ownership and of production of aircraft for private sale showed but little change during the year. At the end of 1935 there was a total of 9072 non-military aeroplanes in the United States, a substantially lower figure than existed at the end of 1930. The number of pilots was also well down from five years ago, to just under 15,000. The production for the year was a little over 1000 aeroplanes of non-military types, about a third of the total number being two-passenger light planes with engines of less than 60 h.p. Production of the more expensive private ownership types, selling at from \$4000 to \$10,000, remained substantially on the 1932-34 level. The year's most encouraging sign was a great increase in the number of applications for student permits by prospective pilots. The total number of such permits to learn to fly outstanding at the end of the year was just over 25,000.

The most novel of private-ownership developments came from France, where the publication by Henri Mignet of a book on *How to Build the Flying Flea (Pou de Ciel)* led some hundreds of amateur enthusiasts to start the construction of tiny tandem monoplanes, of small manoeuvrability and less performance but reputed to be very easy for the novice to fly, powered with motorcycle engines. Like previous home-building booms on a smaller and less-well-publicized scale, the Pou-de-Ciel excitement was responsible for the partial construction and abandonment of a large number of machines, and for the completion of a number that did little or no flying. One of the Flying Fleas did, however, succeed in crossing the English Channel during the summer. Robert Kronfeld, famous glider pilot, paralleled its accomplishment by flying from London to Paris on a 13 h.p. aeroplane of German origin.

America's most non-stopping private pilot, Dr J. D. Brock of Kansas City, brought his unbroken string of daily flights up to over 2000 during the year,—more than five years without missing a day in the air.

Technical Developments. Important items of the year's technical evolution were the introduction of the automatic propeller, the position of its blades adjusted through its governor to maintain a constant engine speed under all conditions of flight; the automatic mixture control for the engine, relieving the pilot of one of the most difficult of his manual power-plant adjustments; an increasing use of spot welding in place of riveting for assembling aluminum-alloy structures; and the transport lines' general acceptance of cruising control, with the conditions of engine operation and the altitude at which to fly carefully determined from time to time during each trip to best combine maximum economy of operation with the closest possible adherence to schedule (a technique developed and refined by Edmund T. Allen, American leader in the profession of test-pilot engineering).

The year was one of steady refinement, but of no important change of direction, in power-plant evolution. Diesel engines gained ground to the extent that their ultimate use on long-range aircraft was generally accepted as probable, but they

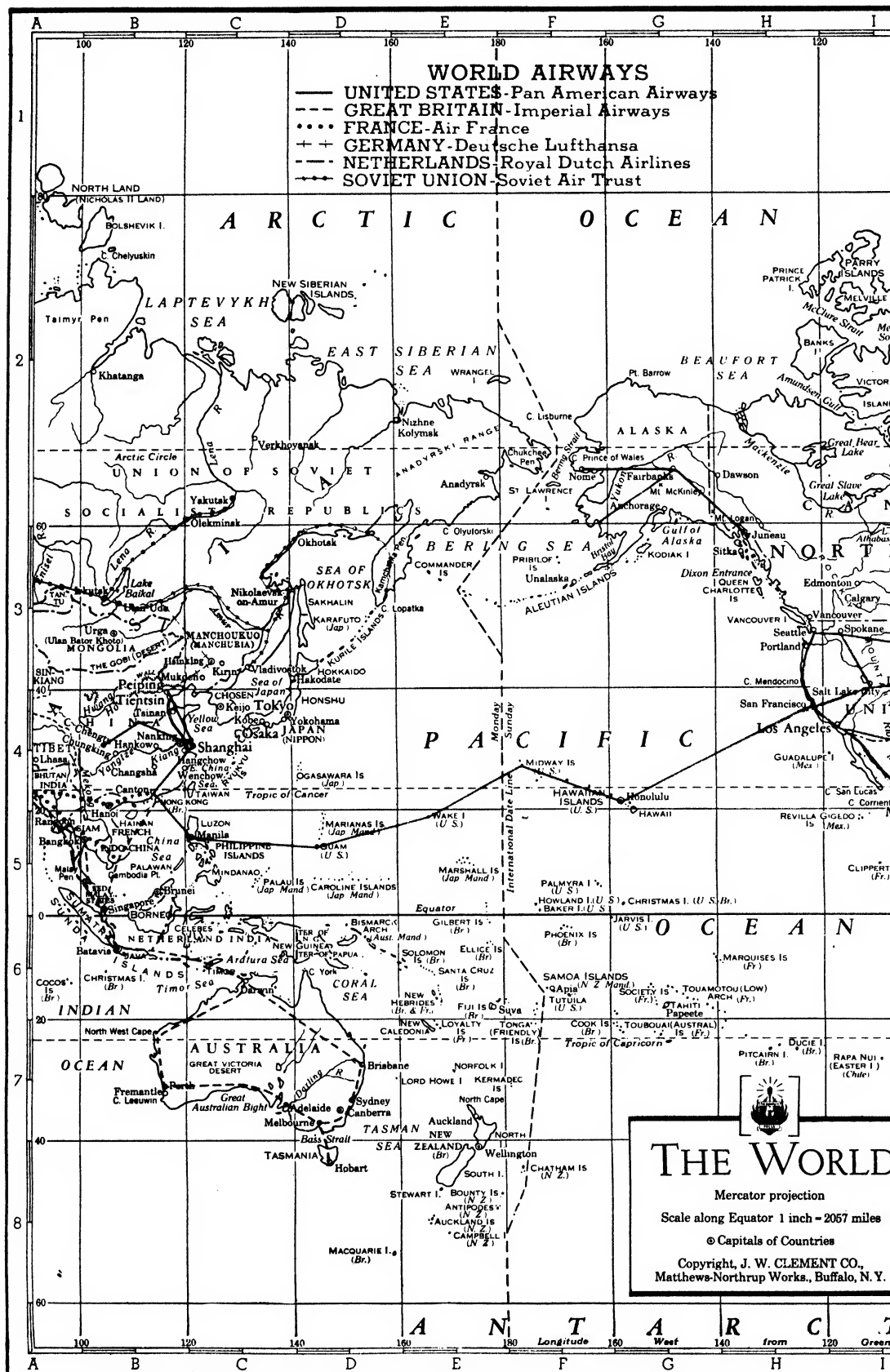
remained highly experimental. The balance between water-cooled and air-cooled engines was substantially undisturbed, with a slight revival of interest in the former in the United States, and a continuing use of liquid-cooled engines on most European military aircraft of very high performance and of American-made air-cooled engines on a very large proportion of the European non-military aircraft on which commercial economy and reliability were paramount.

Flights of the Year. As already observed, notable flights were comparatively few. There were several Atlantic crossings, perhaps the most interesting being a somewhat leisurely trip from New York to Norway made during the summer by Thor Solberg and Paul Oscanyan in a small commercial flying boat of several years' age. Jean Batten's crossing of the south Atlantic has already been mentioned. Amelia Earhart continued to make news, first with a solo flight from Honolulu to San Francisco in 18 hours 15 minutes (in mid-January), second with a non-stop trip from Mexico City to New York in 14 hours 19 minutes in May. Laura Ingalls crossed from New York to Los Angeles without stop in July, the first non-stop west-bound trip by a woman, and on September 12th returned across the continent in 13 hours 34 minutes for a new feminine record. The male transcontinental record with transport aeroplanes was several times broken during the early spring, finally being set at 11 hours 6 minutes by D. W. Tomlinson with a Douglas plane.

A few days later the same pilot and machine made a number of new speed records over long closed courses, the most striking being a speed of 191 miles per hour over a distance of 2000 km (1242 miles), and carrying a load of 2000 kg (4400 lb). Several of the Tomlinson records were recaptured for Europe later in the year by an Italian machine. An Italian flying boat traveled 3080 miles without stop, for a new seaplane distance record that stood only six months before. Lieut. Commander K. McGinnis piloted a Navy Consolidated flying boat, remarkable for folding its auxiliary lateral floats up into the wings and so eliminating their air resistance when once off the water, from Panama to San Francisco without pause (a distance of 3443 miles). The Navy sent a squadron of patrol flying boats to cruise in the Aleutian Islands during the summer in accordance with a new determination to get operating experience in areas of persistent bad weather, it sent another group of squadrons of some 40 machines on a mysterious mission during the summer manoeuvres in the Pacific that carried them out through the Hawaiian group as far as Midway, where Pan American was just then preparing for regular commercial service.

Late in the autumn, David Llewellyn and Mrs. Jill Wyndham, in a British light plane, lowered the Cape Town-London record (approximately 7500 miles, by the route taken) to 6 days 8 hours 27 minutes.

Among the long-distance fliers, the year was one of tragedy. On August 16, Wiley Post (q.v.), twice breaker and still the holder of the round-the-world record, was killed in a crash near Point Barrow, Alaska. With him died Will Rogers. In December, hope was finally abandoned for Sir Charles Kingsford-Smith (q.v.) who had disappeared a month before while flying across the Sea of Timor en route to Australia. First to cross the Pacific by air and holder of records innumerable, Sir Charles lost his life in the very month in which



the regular trans-Pacific air service for which he had shown the way seven years before was becoming a reality.

Records and Races. Among the straight record performances involving no long distance flying, the most interesting of the year was Howard Hughes' new landplane speed record of 352 miles per hour, almost 40 miles per hour above the previous mark, though still nearly 100 miles per hour below the seaplane record, a discrepancy due partly to the greater interest shown in seaplane racing over a number of years and to the enormous sums expended by governments in sponsoring it, and partly to the feasibility of landing a seaplane at higher speeds than would be safe on any landing field. Mr. Hughes' speed, incidentally, was the highest ever made with either landplane or seaplane with an air-cooled engine.

The quest for a duration record with refueling in flight, for several years dormant, was resumed during the summer when Fred and Al Key, of Mississippi, kept an aeroplane with a Wright Whirlwind engine continuously in flight for 27 days 5 hours 34 minutes.

Late in the autumn there came a report, not yet subjected to official verification, that a Russian pilot named Vladimir Kokinaki had climbed to a height of 47,800 feet, about 400 feet above the existing world's altitude record.

In the National Air Races at Cleveland the principal competitive events were colorless except for a sensationally close competition in the race from Los Angeles to Cleveland, won by Ben O Howard, a transport line pilot flying a four-passenger cabin machine of his own design and construction, in 8 hours 33 minutes 16 seconds. Roscoe Turner reached Cleveland only 23 seconds behind Howard. The same aeroplane won the principal closed-circuit speed race, for the Thompson Trophy, at an average of 220 miles per hour, the lowest winning speed in several years.

The fastest of European closed-course events, the Deutsch Cup race for machines with engines of not over 490 cu. in. piston displacement, was won by Delmotte, in a Caudron monoplane, at an average speed of 276 miles an hour.

Soaring Flight. The national soaring contests at Elmira were better organized and aroused more popular interest than ever before. The soaring camp and its accompanying meteorological station have become firmly established as a permanent feature, but the 1935 contests failed to present any remarkable records. The longest flight was Richard DuPont's, 120 miles; the highest altitude, also DuPont's, 4980 ft. The soaring flight of the year came (as usual) from Germany, where Rudolf Oeltzschner traveled the air-currents for 313 miles across country.

Autogiros and Helicopters. The year was comparatively lacking in news of rotating-wing aircraft progress. Work continued on wingless, or direct-control, autogiros, and the U.S. Army bought its first autogiro. No attempt was made to stimulate a commercial market until there should have been further trial and refinement of the new type.

The most interesting of the year's helicopter events was the announcement that Louis Breguet, leading French aeroplane builder, who dabbled in helicopters 30 years ago and built one of the first direct-lift aircraft to raise itself from the ground, had returned to his first love. Of the performance of the new Breguet helicopter, little is known except that it has made flights to a height sufficient

to escape the immediate effects of the direct reaction of air compressed between the horizontally-rotating propellers and the ground, so that it could be regarded as truly and normally air-borne.

Balloon to the Stratosphere. The ballooning event of 1935 was the final success of the stratospheric campaign jointly sponsored by the Army Air Corps and the National Geographic Society. The explosion of the summer of 1934, at a height of several miles, was followed by a bursting of the balloon during the process of inflation early in July, 1935. Repaired and re-inflated, it went through its next trial without a hitch, carrying Capt. Orvil A. Anderson and Capt. A. W. Stevens to a height of 72,395 ft., far above any previous record, on November 11. The flight was started from Rapid City, North Dakota.

Airships. American rigid airships, on the other hand, met with what looked as though it might very possibly be final failure. The *Macon* followed the *Akron* to destruction on February 12. The *Macon* went down as a result of structural failure in a comparatively gentle storm off the California coast, and extensive investigation left the accident still without any satisfactory explanation. Fortunately, only two lives were lost. The government's future policy on airships was still under consideration at the end of the year, but with little indication that the Navy Department would ask or that Congress would supply the funds for more construction.

Long-continued trouble-free operation of rigid lighter-than-air craft remained a German monopoly. The *Graf Zeppelin* voyaged back and forth across the South Atlantic, and the new *L.Z. 129*, larger than the *Graf* and Diesel-engined, neared readiness for entry into service between Germany and the United States.

Military Expansion. Military aviation the world over was dominated by, and was dominant in, re-armament programmes. American appropriations for new aircraft for the Army and Navy were carried to a point 60 per cent above the previous post-war high,—to over \$50,000,000 for the year. A virtual doubling of American air forces was planned for the next five years. European nations thought in terms of much more hurried action. During the spring, Germany formally admitted a self-emancipation from the restrictions of Versailles which had long been *de facto* apparent. Though no formal announcement of the strength of the German air force or of the rate at which it was being increased was forthcoming, a tremendous acceleration of activity was evident to the most casual observer, and sober and competent estimates put the German rate of construction of new military aeroplanes as high as one hundred a week. It was evident that if Germany did not actually have the most powerful air force in the world by the end of 1935 she very soon would, barring counteracting measures elsewhere.

Counteracting measures were, of course, taken. Though a veil of secrecy of an impenetrability unprecedented in peace-time hovered around all military air matters, no doubt was left of the intention of all the major European states and most of the minor ones that their present air forces should be taken merely as a foundation on which to build to towering heights. Extraordinary appropriations for re-armament, quite outside the regular budgets, were the order of the day, and no factory capable of building military aircraft wanted for work to keep it running overtime.

American Air Forces. Within the American Services, the most important development was the formal organization of the General Headquarters Air Force on the lines that had been recommended by the board of which Newton D. Baker was the chairman. A mobile force operating independently of ground troops, it includes all available fighting and bombing planes except those used for training and for the local defense of such overseas areas as the Canal Zone and Hawaii. Divided into three "wings" normally based on the Atlantic, Pacific, and Gulf coasts, respectively, the entire force can be united in any threatened sector in a few days' time. Colonel Frank M. Andrews was appointed to command it, and was given the brevet rank of Major-General as an index of the new unit's importance.

The Washington command of the Air Corps changed hands. Maj.-Gen. Benjamin D. Foulois, the Army's first pilot (trained in 1908), retired from office and from the Army at his own request. Shortly before submitting it, he had been formally and fully exonerated by the Secretary of War under a series of charges of extra-legal tactics in aircraft procurement that had been filed by the House of Representatives Committee on Military Affairs. Maj.-Gen. Oscar Westover succeeded General Foulois as Chief of Air Corps, an office of which the responsibilities had been re-defined and especially focused upon the procurement of *matériel* as a consequence of the G.H.Q. Air Force's creation to control operations in the field.

In *matériel* matters it was a period of legal tangle gradually progressing towards solution. The War Department became so involved in its attempts to interpret the law in a fashion that would satisfy Congressional committees, and retraced its steps so often, that for a period of almost one year not one single production aeroplane was delivered to the Air Corps. By the end of the year, however, a reasonably coherent policy seemed to have been evolved, and aeroplanes were being ordered in quantity, for deliveries in the latter part of 1936 and early 1937. The Navy's affairs went more smoothly, as has usually been the case in aeronautical matters.

A number of competitions for new military types were held. The most interesting aeroplane that they produced was the four-engined Boeing bomber, a machine of 30,000 lb. weight (considerably larger than any bomber heretofore used by the Air Corps) and exceptionally clean lines and high performance. Though destroyed during the competition, through no fault of the aeroplane's own, its trials had gone far enough to make the Army order thirteen examples, at approximately \$300,000 each. The major bomber order of the year went, as a result of the same competition, to Douglas,—for a considerably smaller and less costly machine.

AFGHANISTAN, äf-gän'i-stan'; -stän'. A monarchy of central Asia, bounded by the Soviet Union, India, and Iran. The area is estimated at about 245,000 square miles and the population at 11,000,000. Kabul, the capital, has about 80,000 inhabitants; Kandahar, 60,000 (with suburbs); Herat, 30,000; and Mazar-i-Sharif, 20,000. Persian and Pashto are the principle languages. The people are illiterate for the most part, although primitive elementary schools exist throughout the country. Several secondary schools with European instructors have been established, as well as a university at Kabul and technical, art, commercial, and medical schools.

Production, etc. Fruits, vegetables, and cereals are grown in the irrigated plains and valleys, and castor-oil, madder, and asafetida plants abound. The native fat-tailed sheep is the chief source of meat, of grease used as a substitute for butter, and of skins and wool cloth for wearing apparel. Coal, copper, iron, lapis lazuli, silver, petroleum, and some gold deposits are found but lack of transportation facilities prevent their exploitation. Kabul contains state-owned factories for the manufacture of matches, buttons, leather, and boots; a factory for making arms, ammunition, and clothing for the army; and a mint. Silk, woolen, and hair cloths and carpets are widely manufactured by handcraft.

The chief imports are cotton goods, dyes, sugar, hardware, leather, silver articles, and tea. Raw wool, fruits, timber, carpets, and skins are the main exports. Trade is principally with India, Iran, and the Soviet Union. The chief routes to India are from Kabul to Peshawar by way of the Khyber Pass and from Kandahar to the railway terminal at Chaman in Baluchistan. Goods are transported mainly by camels and pack-horses although some roads are passable by motor cars in dry weather. There are telephone systems in the chief towns, telegraph communication linking Kabul and Kandahar with Peshawar and Chaman, and a wireless station in Kabul communicating with India and Eastern Europe.

Government. Afghanistan under the fundamental law of Oct. 31, 1931, is a constitutional monarchy, with legislative power vested in the King, a Senate of 40 members appointed by the King for life, and a National Assembly of 120 elected members. King in 1935, Mohammed Zahir Shah, who succeeded to the throne upon the assassination of his father, Mohammed Nadir Shah, on Nov. 8, 1933.

Press dispatches of July, 1935, reported that the Afghan Government had obtained the loan of a German Government official to make a two-year study of its communication and transportation systems with a view to their modernization.

AFRICA. See articles on the respective countries and territories, including EGYPT; ETHIOPIA; KENYA; MOROCCO; SOUTH AFRICA; UNION OF; TUNISIA; etc. See also ARCHAEOLOGY; EXPLORATION; PHILOLOGY; MODERN.

AGNES SCOTT COLLEGE. An institution for the higher education of women in Decatur (Atlanta) Ga., founded in 1889. The enrollment for 1935-36 was 500. The faculty number 50 and the administrative staff 14 members. The endowment is \$1,600,000, and the gross income for 1924-35 was \$270,000. There were 31,000 volumes in the library. During 1935 the gifts to the college were in excess of \$400,000. President, James Ross McCam, Ph.D.

AGRICULTURAL ADJUSTMENT ADMINISTRATION (AAA). See AGRICULTURAL EXTENSION WORK; AGRICULTURE; DAIRYING; LIVESTOCK.

AGRICULTURAL EXPERIMENT STATIONS. The national system of experiment stations functioned actively and efficiently during the year in every state of the United States, the territories, and major insular possessions. The income of the stations for the fiscal year ended June 30, 1935, approximated \$15,072,000, compared to \$14,188,455 in 1934, and \$18,056,000 in 1931 when station revenues were at the peak. Of the total, the Federal Government provided \$4,388,000, which comprised \$90,000 for each state, \$15,000 for Alaska, \$28,000 for Hawaii, and \$25,000 for Puerto Ri-

co. The Federal Station in Hawaii associated with the University of Hawaii at Honolulu also received \$32,977 from direct appropriations through the Department of Agriculture and \$31,000 from territorial and university funds. The Puerto Rico Station at Mayaguez received a Federal appropriation of \$35,959 and an allotment of \$113,000 from sugar-processing-tax funds, while the Insular Government Station at Rio Piedras received \$25,000 under the Puerto Rico Act of 1931 and \$111,328 from the Insular Government and other sources. Excellent progress was made toward the development of a coordinated research programme in which all stations in Puerto Rico participate.

The Bankhead-Jones Act signed by President Roosevelt June 29, 1935, providing for research into basic laws and principles relating to agriculture and for other purposes, authorizes an increase of the research funds of the experiment stations and the Department to the extent of \$1,000,000 for the fiscal year 1936 with an annual increment of \$1,000,000 each year until the appropriation reaches a continuing maximum of \$5,000,000 beginning with the year 1940. This appropriation is allotted on the basis of 40 per cent to the Department, and 60 per cent to the experiment stations in the States, Alaska, Hawaii, and Puerto Rico, the allotment to the stations, which is on the basis of rural population, to be offset by an equal sum from the States. The Act provides that all its grants are to be in addition to sums authorized by previous legislation.

The stations during the year worked on about 7000 projects which provided for research into almost every phase of farming and rural life. A large proportion of the station activities, especially those dealing with more urgent rural problems such as recovery and readjustment measures, were in co-operation with the U.S. Department of Agriculture. All of the 50 State stations and all but one of the research bureaus of the Department had formal cooperative agreements of some kind. There were also many examples of less formal cooperation. Many cooperative undertakings organized on an emergency basis as parts of the national recovery programme again were participated in by practically all the stations and Department bureaus.

The Office of Experiment Stations of the Department of Agriculture, as required by law and executive authorization, administered Federal funds provided by the Hatch, Adams, Purnell, and supplementary acts for the support of experiment stations in the several States and in Alaska, Hawaii, and Puerto Rico; sought to coordinate the work of the Department of Agriculture with that of the stations in every practicable way; administered the Federal stations in Hawaii and Puerto Rico; prepared and published the usual publications designed to aid in carrying out the purposes of the Federal Acts; issued *Experiment Station Record* which, under the editorship of Howard L. Knight, completed its 73d volume; and rendered various other special services to and for the experiment stations. Kansas State College conferred the honorary degree of doctor of science on James T. Jardine, Chief of the Office of Experiment Stations, at its June commencement.

Necessary research facilities were fairly well maintained during the year and a number of important improvements and additions to land were made possible through various emergency funds and private donations. The Hawaii Station erected a two-story concrete-block building costing \$68,000, to house station offices and laboratories. The Georgia Station built a fire-proof seed-barn at Ex-

periment and a community cannery at its mountain substation. A new greenhouse was built at the New Jersey Station for studies to determine the rôle of minor elements, and the Massachusetts Legislature provided a special fund for nursery research and for enlarging greenhouse and laboratory facilities at Waltham Field Station. An office building was being built at the Southeast Substation at Waseca, Minn., and also a laboratory to care for fundamental research in animal production. The Nevada Station rebuilt its dairy plant at Fallon, which largely had been destroyed by fire in November, 1934. To accommodate the regional erosion nursery for the Pacific Northwest and other forage and field crops work of the Department of Agriculture and the Washington Station, 160 acres more land adjoining the station farm was acquired. The Indiana Station added 80 acres for experimental plots to its adjoining soils and crops farm. The Florida Agricultural Research Institute gave the Citrus Substation at Lake Alfred 40 acres of land for development of citrus work. L. H. Bailey, professor emeritus of agriculture, and Mrs. Bailey presented Cornell University one of the most extensive herbariums in the United States. The gift comprised over 125,000 mounted herbarium sheets, together with 4000 technical books related to horticulture and botany, thousands of photographs, working equipment, etc., buildings housing the collection, and about $\frac{1}{4}$ acre of land. The university authorized the establishment of an administrative unit in the College of Agriculture to be known as the Liberty Hyde Bailey Hortorium.

The Kentucky and Minnesota Stations celebrated their fiftieth anniversaries during the year, and the Northwest substation at Crookston, Minn., observed the 40th anniversary of its establishment, all with appropriate ceremonies. Several changes in directorships occurred during the year, including P. V. Cardon, director of the Utah Station since 1928, who took charge of the Division of Forage Crops and Diseases of the Department of Agriculture, Bureau of Plant Industry. O. C. Magistad succeeded J. M. Westgate as director of the Hawaii Station. A number of directors were on leave, engaged in various emergency and recovery activities. Director J. H. Skinner of the Indiana Station received the honorary degree of doctor of agriculture from Michigan State College. R. A. Moore, head of the agronomy department of the Wisconsin Station, retired June 30 after 40 years' service. Farmer friends dedicated a memorial at Ashland, Wisconsin, to E. J. Delwiche, superintendent of branch stations of the Wisconsin station, for his untiring and unselfish efforts to help farmers in northern Wisconsin.

New research stations of the Department of Agriculture included the Rocky Mountain Forest and Range Experiment Station, with headquarters at Fort Collins, Col., in co-operation with the State College of Agriculture under the Forest Service to serve the Central Rocky Mountain States and under the direction of Dr. Richard E. McArdle of the University of Idaho. The U.S. Forest Service Equipment Laboratory was established at Spokane, Wash., under general supervision of Regional Forester E. W. Kelley, to assemble the technical resources of the Forest Service for improvement of forest work machinery. Additional erosion experiment stations were established by the Soil Conservation service at State College, Pa., Ithaca, N. Y., and at Mexican Springs, N. Mex. Ten others were transferred to this service Apr. 1, 1935, from the Bureaus of Chemistry and Soils and Agricul-

tural Engineering. (See also reports of the Chief of Forestry Service and of Chief of Soil Conservation Service, 1935.) The U.S. Department of the Interior was providing a 25-mile square area with equipment, 40 miles west of Burns, Oregon, for experimental livestock grazing in cooperation with the Oregon Station which was to conduct the research for the benefit of the Pacific Northwest. The main tract was to be stocked with 200 head of cattle and experimental bands of sheep will be grazed on supplementary land adjoining the main tract.

Necrology. Experiment station workers dying during 1935 included Robert C. Burdette, associate entomologist of the New Jersey Stations; James M. Bartlett, head of the chemistry department of the Maine Station; S. H. Essary, botanist of the Tennessee Station; James A. Neilsen, research assistant in horticulture of the Michigan Station; Charles I. Wade, treasurer of the Virginia Polytechnic Institute and Station; Alexander S. Alexander, head of the Wisconsin Station department of veterinary science 1903-30 and thereafter professor emeritus died July 12. Thomas C. Atkeson, long associated with the West Virginia University and station and prominent in the Grange and as an agricultural writer, died March 26. Louis G. Carpenter (q.v.), irrigation engineer, director of the Colorado Station 1899-1911, died September 12. James Dryden, expert poultry husbandman, connected with the Utah Station and with the Oregon Station (1907-30), died February 5. David Griffiths, botanist of the Arizona Station (1900-01) and subsequently with the Department of Agriculture, died March 19. William P. Cutter, librarian Bermuda Biological Station for Research, formerly librarian of the U.S. Department of Agriculture (1893-1900) and chemist Utah Station (1890-93), died May 22. Abram W. Harris, director of the office of Experiment Stations, 1891-93, and at one time president of the University of Maine, died February 21. Hugo de Vries (q.v.), emeritus professor of botany in the University of Amsterdam and internationally known for his contributions to genetics and plant breeding, died May 20. F. A. F. C. Went, retired professor of botany in the University of Utrecht, at one time (1891-96) director of the West Java Sugar Experimental Station, and currently president-elect of the International Botanical Congress, died July 24.

Bibliography. Consult also *Experiment Station Record*, vols. 72, 73, 1935; *Report of the Chief of the Office of Experiment Stations, 1935*; *Report on the Agricultural Experiment Stations, 1934* (1935); *Workers in Subjects Pertaining to Agriculture in State Agricultural Colleges and Experiment Stations, 1934-35*; (all U.S. Dept. of Agriculture); Annual reports and bulletins of the several State Experiment Stations; *International Review of Agriculture*; *Monthly Bulletin of Agricultural Science and Practice* (Rome); *Rothamsted Experimental Station* (Harpenden). *Report for 1934* (1935). Executive Council of Imperial Research Bureaux, 5 Rpt. (1933-34), London, 1935.

AGRICULTURAL EXTENSION WORK. Coöperative extension work in agriculture and home economics continued to grow in the esteem of the nation in 1935. Extension agents, who are the local representatives of the U.S. Department of Agriculture, the State land-grant colleges, and the agricultural counties of the country, met in 1935 steadily increasing calls from rural people for guidance in solving their problems of efficient farm and home management and marketing and in understanding and taking advantage of the

farm recovery programmes put into effect by the Agricultural Adjustment Administration, the Farm Credit Administration, and other agencies. More than 4,200,000 rural families made use of extension information. Extension agents visited more than 1,200,000 farms and farm homes, held over a million meetings for the discussion of important farm and home problems, and, with the aid of volunteer local leaders whom they had trained, completed a comprehensive attack on production and management problems in over 2700 counties.

Realizing the importance of extension work, Congress passed the Bankhead-Jones Act which provided \$8,000,000 for use during the fiscal year 1935-36. This amount is to be increased by jumps of \$1,000,000 each fiscal year for four years until the total of \$12,000,000 is reached in 1939-40. Of these new funds, \$20,000 go to each State and the Territory of Hawaii and the remainder is divided among them in the proportion that the farm population of each bears to the total farm population. With these additional funds work will be begun in completing the extension organization, which requires at least one agricultural agent, one home demonstration agent, and one 4-H club agent or assistant agent in every rural county where the number of farms, volume of work, and the State agricultural situation warrant such service.

At the end of the year there were 2838 county agricultural agents, 706 assistant agents, and 211 Negro agents working with farm men and boys; 1350 county home demonstration agents, 124 assistant agents, and 152 Negro agents working with farm women and girls; and 182 county club agents, 37 assistant agents, and 1 Negro agent devoted full time to boys and girls in the 4-H clubs. The administrative and supervisory staff, made up of 598 workers and 1428 specialists in various phases of agriculture and home economics, assisted the agents with their more technical problems. These workers, together with 912 supervisors and assistants in cotton adjustment, made a total staff of 8539 as compared with 7661 at the end of the previous year.

County agricultural agents continued to play an active and vital part in advancing the emergency measures to improve a stricken agriculture. The agent's office was the point of contact and clearing house between the farmers and the many agencies, engaged in agricultural relief. His biggest accomplishment was in helping the farmers to understand the need for agricultural adjustment and to meet the requirements of adjustment contracts. In this work, the agents were assisted by county and community committeemen whom they had previously trained.

Extension workers and farm people began during the year an intensive study of facts regarding the local and national agricultural situation in an attempt to determine what adjustments are necessary in farming systems and production practices, both as they relate to farm income and conservation of the soil.

Many States set up during the year local groups for the discussion from all angles of some of the important questions of the day. Using material prepared by the Department of Agriculture and the State agricultural colleges and supplementing this material with facts from local and other sources, farm people were encouraged by extension agents to discuss freely and openly problems of international, national, and local interest.

As a result of the reduction in crop acreages involved in the adjustment programmes, farmers

wanted to use every precaution to insure productive crops on the acres remaining in cultivation. Consequently, county agents received more than the usual number of calls from farmers and gardeners for instructions which would be helpful in preventing loss and spoilage from blights, rots, and other plant diseases. In many States the insect problem was very important during the year. The clouds of grasshoppers and the hordes of chinch bugs which plagued farmers in some of the Central and Western States were fought with every resource of county, State, and nation—result: more than 20,000,000 acres of crops were protected. Livestock disease control was given increased emphasis by county agents, who also helped farmers to solve such livestock problems as inexpensive silo construction, better feeding, improvement of quality of stock, marketing, cutting and curing of meats, and the like.

Agents continued to assist the Farm Credit Administration and local production credit association in explaining Government credit facilities to farmers and in helping them to take advantage of the opportunity for financing farm activities at a reasonable rate of interest.

The increased use of economic outlook information, farm accounting, cost control, farm analysis, budgeting, and other methods designed to improve farm management efficiency and increase profits, were fostered by the agents.

The widespread need among rural people to conserve and improve the soil and to rebuild or maintain their farm homes caused agents to give more than ordinary attention to measures designed to keep the farm home self-supporting. Farmers were advised in the best practices of erosion control, use of lime, the growing of more legumes and grasses for good pasture, tree planting control measures, and similar methods of maintaining or increasing soil productivity. Repair and maintenance of farmhouses and buildings were recognized as a pressing need and both county agents and home demonstration agents cooperated with the Federal Housing Administration in giving rural families information on farm housing and relief. Groups of farmers were also aided in obtaining the use of electricity through the extension of electric lines by the Rural Electrification Administration.

The extension service cooperated with the Resettlement Administration in rehabilitating distressed farmers and putting them on a basis where they may become self-supporting.

Home demonstration agents, too, have had their part in the forward movements under way to place the farm in its proper position in the national economic pattern. The general awakening of farm women to new possibilities created by the modern rural trend immeasurably increased the responsibilities of home demonstration workers.

The principal efforts of the agents were focused upon the conservation of cash, the protection of health, and the maintenance of morale. To aid the farm homemaker in utilizing to the best advantage her limited resources, home demonstration agents placed considerable emphasis on the live-at-home programme, upon budgeting funds, keeping household accounts, wise buying, remodeling and care of clothing, food preservation, home-made equipment, and the like. An effort was also made to help the farm women increase the family income. They were taught to prepare and market graded and standardized fruit, garden, dairy, and poultry products and to organize and manage curb markets

and wayside stands for the sale of their products.

Recognition of the economic importance of health to the individual and of its relationship to morale has heightened interest among farm women in obtaining help to improve their living conditions. Home sanitation, construction of sanitary toilets, screening of windows and doors, better ventilation, better posture, disposal of sewage, and installation of running water were some of the matters directly related to health upon which home demonstration agents and specialists gave advice.

Home demonstration agents recognized the need among farm women for recreation, hobbies, and for the development of appreciation of good music, art, books, plays, and for other healthful and cultural pursuits for their leisure moments. Farm women were also helped in many ways in the year, including improvement and beautification of farm home interiors and exteriors, child development and parent education, kitchen improvement and rearrangement, and the like.

Due to the emergency, it was difficult for county agricultural agents and home demonstration agents to give as much time as formerly to farm boys and girls in the 4-H clubs. Plans for club work were adjusted to meet existing situations. These young farm people, under the guidance of extension agents and local leaders, discussed present-day agricultural problems and thus equipped themselves to become farmers and homemakers, to play a prominent part in future farm programmes and to be leaders in rural community organizations. Among other things, club members learned about soil conservation, forestry, range management, farm record keeping, home beautification, health, music, gardening, livestock, and handicraft.

The total funds allotted for cooperative extension work in the States and Territories during the fiscal year 1935-36 amounted to \$28,780,000, an increase of \$8,738,000, or 43½ per cent more than the amount available during the previous year. Much of the new funds provided were in substitution for grants made to the Extension Service during the previous two years by the Agricultural Adjustment Administration. Of the total funds allotted \$16,936,000 came from Federal sources and \$11,844,000 from sources within the States and Territories.

Bibliography. Consult *History of Agricultural Extension Work, 1785-1923*, by A. C. True, (U.S. Department of Agriculture, Miscellaneous Publication 15, 1928); *History of Agricultural Education, 1785-1925*, by A. C. True, (U.S. Department of Agriculture, Miscellaneous Publication 36, 1929); *The County Agricultural Agent*, by H. W. Hochbaum, (U.S. Department of Agriculture, Miscellaneous Extension Publication 1, 1932); *Home Demonstration Work*, by Grace E. Fry-singer, (U.S. Department of Agriculture, Miscellaneous Publication 178, 1933); *Boys' and Girls' 4-H Club Work*, by C. B. Smith, (U.S. Department of Agriculture, Miscellaneous Circular 77, Rev. 1935).

AGRICULTURE. Features of American agriculture in 1935 included substantial farm recovery which aided general recovery; increases in acreage and production of crops with somewhat lower prices for farm products, and a sizable increase in gross income over 1934; great changes in the weather conditions affecting agriculture compared with 1934; beneficial effects of the activities of the Agricultural Adjustment and Farm Credit

Administrations; continued advances in agricultural credit conditions; continued improvement in farm real estate values and in the tax situation; rise in farm population and better living conditions on the farm; increase in consumer demands for farm products; decline in exports and increase in imports of agricultural products; and reductions in burdensome surpluses of basic farm commodities (except cotton). The several factors active in the agricultural industry in 1935 are treated in greater detail in the following pages.

Agricultural Situation. The gross income from farm production of the United States for 1935 was tentatively estimated by the U.S. Department of Agriculture at \$8,110,000,000, compared with \$7,266,000,000 for 1934 and \$5,337,000,000 in 1932, the low point of the depression. Rental and benefit payments which contributed materially to farm income since 1933 and are included in the above estimates were estimated at about \$480,000,000 from the crop adjustment programmes of 1935 compared with \$594,000,000 paid on 1934 programmes. Cash income from 1935 production was about \$6,900,000,000, which was 10 per cent over that received in 1934. The increased value of goods retained for home consumption, about \$1,200,000,000 versus \$1,037,000,000 in 1934, resulted from better conditions for farm gardens and marked increase in prices and relatively stable farm consumption of livestock products. A pronounced rise in income came from both crops and livestock from 1934 to 1935. The increase in income from livestock and livestock products was fairly general, whereas that from crops was most marked in grains, vegetables, and sugar.

Farmers' expenditures again rose less than gross income so that the actual position of the farm operator had improved more during 1935 than was indicated by increase in gross income. Increases in current expenditures for production and for wages to hired labor appeared to be only moderate, being offset partly by lower interest rates on farm mortgages. Marked increases in tax levies on farm property were not anticipated for 1935. Indications were that current production expenses plus wages, taxes, interest, and rent payable, and depreciation of buildings and equipment would amount to about \$4,000,000,000 in 1935 compared with \$3,832,000,000 in 1934. This deduction for production expenditures left available to farm operators for labor, capital, and management an income of about \$4,110,000,000, the largest return since the \$5,669,000,000 in 1929.

The greater income of farmers in 1935 was accompanied by marked increases in purchases of commodities both for the family and for production, being most noticeable in clothing, house furnishings, farm machinery, automobiles, and building materials. The increase in farm income evidently enabled farmers to improve their standard of living to more nearly the level prevailing in 1925-29, and the rise in farmers' purchasing power was instrumental in improving economic conditions from the retail merchant in small towns back to the manufacturer and the producer of raw materials.

Agricultural Credit. Continued improvement in agricultural-credit conditions evident in 1935 resulted from the increase in farm income in each year since 1932, together with measures taken to reduce farmers' debt burdens. Although the debt situation of many farmers, particularly in areas which suffered from drought, was still unsatisfactory, higher prices for farm commodities brought farm incomes into better alignment with fixed

charges such as interest and taxes. Interest rates on farm mortgage loans increased during 1935 and were at the lowest level on record. Additional reductions in interest payments were effected under the refinancing programme of the Farm Credit Administration. Federal land bank loans were being made at 4 per cent per annum, these loans bearing a temporary rate of 3½ per cent for the year ending June 30, 1936, under provisions of the Farm Credit Act of 1935. Commercial banks and individuals in many areas were quoting rates lower than formerly for desirable mortgages. Most insurance companies decreased their rates from ¼ to ½ per cent during the year, some loans being made at as low a rate as 4½ per cent. Commission charges on loans by insurance companies were also reduced greatly or entirely eliminated. These reductions, indicative of a permanent lowering in the average interest rate charged on farm mortgages might be expected, eventually, to be recapitalized in part in relatively higher land values. Improvement in facilities for providing short- and intermediate-term credit for farmers was characterized by further increase in deposits of country banks and in loan operations of the production credit associations.

The agricultural loans outstanding late in 1935 included farm mortgage loans by 39 life insurance companies \$821,000,000 up to Sept. 30, 1935, a progressive decline from \$1,606,000,000 in 1927; and, as of June 30, 1935, banks of the Federal Reserve System, \$259,000,000. Up to Oct. 31, 1935, Federal land banks had outstanding \$2,059,000,000; joint stock land banks \$184,000,000; and land bank commissioners' loans to farmers \$777,200,000. Federal intermediate credit bank loans to regional agricultural credit corporations and production credit associations totaled \$101,000,000 and to other institutions \$53,000,000. Production credit associations loaned \$95,900,000, and regional agricultural credit corporations \$52,000,000. Outstanding emergency crop loans totaled \$114,000,000 and drought loans \$69,000,000.

Agricultural loans by commercial banks at the beginning of 1935 totaled \$1,306,455,000. Loans secured by farm real estate, \$498,842,000, were 38.2 per cent of the total; \$104,152,000 or 8 per cent secured by livestock only; \$159,785,000 or 12 per cent by crops and equipment, or by livestock, crops, and equipment; \$144,845,000 or 11 per cent by warehouse receipts; \$52,491,000 or 4 per cent by other collateral; and \$346,339,000 or 26.5 per cent were unsecured.

Farm Real Estate. Farm real estate values increased during the year ended Mar. 1, 1935, for the second successive year. The greatest advances relative to a year ago took place in the Southern States. There were substantial gains in the East North Central States and in Iowa. In the western part of the Middle West and in certain areas of the Southwest, however, the drought of 1934 influenced valuations adversely. The general improvement the country over was attributed by the U.S. Department of Agriculture to increased farm income, continuation of relieved credit conditions, reduced taxes on some land, and lessened pressure of forced liquidation. Creditor agencies with farms for sale in some cases raised their asking prices, and the general tone of the farm real estate market improved materially. The value of all farm land and buildings in the United States was estimated at \$32,696,000,000 as of Mar. 1, 1935, compared with \$31,655,000,000 on Mar. 1, 1934, and \$30,306,000,000 on Mar. 1, 1933, the low point in more than 15 years. The peak was \$66,316,000,000 in 1920, and

for 1929 the figure was \$47,926,000,000. The acre value for all farm lands with improvements, averaged for the country as a whole, rose to 79 per cent of the prewar value during the year ended Mar. 1, 1935, compared with 76 per cent for March, 1934, 73 for March, 1933, and 89 for March, 1932. The index was 170 at the 1920 peak. Frequency of changes in ownership per 1000 farms due to voluntary sales or trades rose from an average of 17.8 in the year ended Mar. 15, 1934, to 19.4 in 1935; forced sales due to foreclosures, etc., declined from 28 to 21 per 1000 farms; and due to delinquent taxes from 11.1 to 7.3 farms per 1000.

Taxes. Average taxes on farm real estate per acre for the United States as a whole, the U.S. Department of Agriculture reported late in 1935, decreased 14 per cent from the levy of 1932 to that of 1933, and 5 per cent from 1933 to 1934. The 1934 figure was 36 per cent below the 1929 peak, but still 54 per cent above the base year, 1913. In relation to farm real estate values, taxes continued to rise until 1932, and since declined 26 per cent. In 1934, however, taxes per \$100 of value still averaged more than 100 per cent above 1913. Taxes per acre averaged 37 cents in 1934 compared with 39 in 1933, 46 in 1932, 58 in 1929, the peak year, and 24 cents in 1913. That the 1935 levies for the country as a whole would not differ greatly from those of 1934 was indicated by estimates based on personal judgments of State tax commissioners and tax experts in more than half of the States. Benefits to farm owners from recent property-tax decreases were partially offset by substitute taxes. Nearly half of the States enacted general or retail sales taxes in 1932 and later years. Also, farmers paid part of special sales taxes and privilege taxes, revenue from which replaced property-tax revenue to a considerable extent.

Prices. The index of prices received by farmers at local farm markets for agricultural commodities was estimated at 110 per cent of the five-year prewar average on Dec. 15, 1935, 9 points higher than a year earlier. Livestock and livestock products averaged much higher in price than a year ago, while prices received for field crops were generally lower. The average prices received by producers, Dec. 15, 1935, based on reports to the U.S. Department of Agriculture Crop Reporting Board, were estimated for corn 53 cents per bushel, wheat 90.1, oats 25.5, barley 37.5, rye 40, flaxseed 156.4, rice (rough) 70.1, potatoes 64.2, and apples 76.6 cents per bushel, tobacco 17.3 and cotton 11.4 cents per pound, cotton seed \$32.95 and hay \$7.20 per ton. Hogs sold for \$8.72 per 100 pounds, beef cattle \$6.14, veal calves \$7.86, lambs \$8.15, and sheep \$4.21. Eggs were 28.7 cents per dozen, butter 29.8 cents per pound, and whole milk wholesaled at \$1.84 per 100 pounds and retailed at 9.9 cents per quart. Wool brought 23.3 cents per pound and live chickens 16 cents. Milk cows sold for \$51.60 each, horses \$90.60, and mules \$105.90. The corn-hog ratio (number of bushels needed to buy 100 pounds of hogs) was 16.5 versus 15.1 in November, 6 in December, 1934, and 7 in December, 1933.

Exports. Agricultural products exported from the United States, exclusive of forest products, declined in value to \$668,779,000 during the year ended June 30, 1935, as compared with \$787,347,000 during 1933-34, a loss of about 15 per cent, and 65 per cent below the five year average (1924-25 to 1928-29) of \$1,948,000,000. Agricultural products made up 32 per cent of the value of all exports versus 39 during 1933-34. Exports of live animals, dairy products, eggs and egg products, hides and

skins, meats, fish, oils and fats, sugar, tobacco, and vegetables and preparations all show increases in value over the preceding year, totaling up to \$35,105,000. Decreases appeared for animal oils and fats, wool and mohair, miscellaneous animal products, fruits and preparations, grain products, oil cake and oil-cake meal, and miscellaneous vegetable products, totaling \$41,904,000. While the opposite movement of these two classes nearly offset changes in value, the value of exports of cotton declined by \$112,000,000 to account for the major share of the loss in the total value of agricultural exports of 1934-35. The volume index stood at 54 per cent of prewar compared with 83 per cent in 1933-34 and with the previous low level of 50 per cent in 1876-77.

Unmanufactured cotton, 5,066,000 (fiscal year) bales, valued at \$326,877,000, represented 48.8 per cent of the agricultural export value; unmanufactured tobacco, 374,658,000 pounds, valued at \$120,514,000, 18 per cent; fruits and their preparations 10.6 per cent; animals and animal products 10.4 per cent; and grains and grain products 4.8 per cent. See also *Foreign Crops and Markets* 31 (1935) No. 14, pp. 471-478; 18, pp. 605-623.

Imports. The agricultural products (excluding forest products) imported into the United States during the year 1934-35 showed an increase in value and for certain commodities an increase in volume over 1933-34. The total import value amounted to \$969,297,000 versus \$858,912,000 in 1933-34, and exceeded the value of agricultural exports for 1934-35 by \$300,518,000. Agricultural imports made up 54.2 per cent of all imports. Fairly large increases shown by a number of commodities, including cattle, canned beef, butter, feeds and fodders, and some of the grains, were attributed to the severe drought of 1934. On the other hand, the value of imports of some products normally imported in substantial volume, such as wool, flaxseed, and tobacco, declined.

The values of 20 leading agricultural products imported during 1934-35 were for coffee \$135,169,000, sugar \$124,514,000, crude rubber \$112,875,000, raw silk \$74,572,000, feed grains \$29,359,000, bananas \$26,593,000, cocoa or cacao beans \$24,384,000, unmanufactured tobacco \$23,981,000, unmanufactured wool, \$17,466,000, tea \$17,172,000, goat and kid skins \$14,858,000, flax seed \$14,730,000, cheese \$10,644,000, sausage casings \$10,120,000, tallow \$9,086,000, cattle hides and calf skins \$8,819,000, coconut oil \$8,487,000, tung oil \$8,197,000, unmanufactured cotton \$7,870,000, and barley malt \$7,854,000.

The significance of imports and exports of farm commodities and of foreign trade to American agriculture has been interpreted by Secretary of Agriculture Wallace in his report for 1935 (pp. 14-28). See also *Foreign Crops and Markets* 31 (1935) No. 21, pp. 702-708; 23, pp. 771-791.

Population. The farm population of the United States was estimated from U.S. Department of Agriculture surveys at 32,779,000 on Jan. 1, 1935, again establishing an all-time peak, as compared with 32,509,000 on Jan. 1, 1934. The movement from towns and cities to farms totaled 783,000 and the cityward movement amounted to 994,000, but balancing births and deaths and these movements resulted in a net gain of 270,000 persons in farm population, just 3000 larger than the small gain of one year earlier. In 1933, each major geographic division showed small net gains ranging from 1.4 per cent in the East South Central States to 0.2 per cent in the Mountain and Pacific States while in

1934 the Pacific States gained 1.7 per cent, the Mountain States lost 1.2 per cent, and the West North Central States lost 1.1 per cent. The drought was held responsible for some of these contrasts. The reduction in farmward migration in northern and northeastern industrial States probably was the combined result of a farm-housing shortage, somewhat better employment opportunities in non-agricultural industries, and the larger cash relief payments generally available to urban residents as contrasted to rural dwellers.

Outlook. A summary of facts bearing upon the agricultural situation in 1935 and probable developments with respect to agricultural production and marketing in 1936, concerned with domestic and foreign demand, agricultural credit, farm labor, equipment, and fertilizer, the farm family living and the status and future of field crops, vegetables, fruits, livestock, poultry, and their products, prepared by the Bureau of Agricultural Economics, U.S. Department of Agriculture, assisted by State and other Federal agencies, was presented in *The Agricultural Outlook for 1936*. (Misc. Pub. 235, 1935). Consult also *The Agricultural Situation* ([monthly] U.S. Dept. of Agri.), and *The Farm Real Estate Situation*, by B. R. Stauber and M. M. Regan (U.S. Dept. of Agri. Circular 382).

Aftermath of the 1934 Drought. The weather conditions affecting agriculture in 1935, according to the U.S. Department of Agriculture, contrasted strikingly with those of 1934. The general drought of 1934, which had prevailed widely over the country, came to an end. In areas which had suffered worst, rain enough fell to check wind erosion, allay dust storms, and promote crop growth. The central valleys had too much rain, at any rate during spring and early summer; and less than the usual percentage of the country suffered from deficient moisture.

The drought of 1934 began to break in the fall months, when timely rains relieved the acute situation in most regions and prepared the soil for winter cereals. The eastern and northern Great Plains, which had suffered tremendously during the crop-growing season, were especially favored. Only in the southwestern part of the Wheat Belt did the drought persist. Additional relief came to most areas in the 1935 spring, with the continued exception of the southwestern Great Plains. Early spring rains in the northern Great Plains, where dust storms were severe in 1934, prevented widespread harmful soil drifting, and created favorable crop prospects. Finally, in May, heavy rains fell also in southwestern Kansas, southeastern Colorado, northwestern New Mexico, western Oklahoma, and the Texas Panhandle, and ended the droughty, dusty conditions there, although only temporarily in a considerable southwestern area. For following the heavy May rainfall, June and July again had marked deficient precipitation, and drought conditions were reestablished. By the end of July, scanty rainfall and high temperatures produced drought conditions throughout the Plains and Rocky Mountain States. In the central valleys, where drought in 1934 approached the disaster point, rainfall in the spring and summer of 1935 was excessive and caused floods and serious crop damage. Most States farther west had ample irrigation water, mountain snowfall the previous winter having been heavier, and the irrigation water supply much greater than in 1934. In the area from Montana westward, however, the precipitation was insufficient. Up to July 1, most States had received more than normal rainfall,

particularly in the interior of the country, where the excess for the half year ranged from 20 to 50 per cent above normal.

Although the great drought ended in 1935, its effects, chiefly on farm prices and current farm incomes and on farm methods and types of farming, did not. The drought disguised the true relationship between the real capacity of the farms for production and the demand for farm products gave a new impulse to unbalanced production, and complicated the adjustment problem. The direct effects on types of farming in the drought areas and indirect effects in other regions were likewise complicated and important. In normally droughty territory the drought caused a serious loss of topsoil through wind erosion, emphasized the necessity for returning certain tracts to grass, indicated advantages of more diversification, and showed the unwisdom of prevailing tillage methods. It also completed the ruin of many farmers who were unable to make ends meet even before the drought. These effects in combination might ultimately cause farmers in the normally droughty territory to change their methods greatly. In areas not usually droughty the worst effects were expected to be temporary. Regions where the drought did little crop damage, as the eastern Cotton Belt and the northeastern dairy region, nevertheless felt the economic repercussions of the drought's effects elsewhere. A serious farm-rehabilitation problem was left in the worst drought areas. The drought burdened many farmers with debt which they could not hope to carry even under improved economic conditions, and created a difficult problem of refinancing. The Farm Credit Administration refinanced a considerable number of farmers, but its facilities were inadequate for the extreme cases.

Crop Production. The area of the principal (44) crops harvested in the United States in 1935, exclusive of fruits and nuts, was estimated to be 327,661,000 acres, about 14 per cent more than the greatly reduced acreage harvested in 1934 and 8 per cent less than the average production during the 1928-32 period. The total acreage of 44 principal crops was below the usual average chiefly in the Great Plains, where the great drought continued till late in the spring, and in the central and western Corn Belt where continued wet weather in May and early June interfered greatly with field work. Due in part to control programmes, the total area of corn, wheat, and cotton harvested was about 30,000,000 acres below the 1928-32 average. The acreage of oats and barley was about average. The area in sorghums and soy beans, both favored during recent dry years, was about 7,000,000 acres above the five-year average. Lespedeza also was increasing very rapidly and a greatly increased acreage of timothy was harvested for seed in 1935. Crop yields per acre harvested were 25 per cent above yields secured in 1934 but only 1.7 per cent above the usual average. The low yield of spring wheat due to rust and slightly below-average yields of corn, sorghums, and potatoes were more than offset by the heavy yield of hay and the slightly above-average yields of cotton, annual legumes, rice, and tobacco.

The farm value of the 1935 crops in the United States was estimated to be \$5,118,444,000 compared with \$4,779,335,000 in 1934, \$4,114,265,000 in 1933, and \$2,882,195,000 in 1932, and \$4,102,354,000 in 1931. Prices received for this season's crops were about 13 per cent below those received for the short crops of 1934, but with heavier production the ag-

gregate value of the 1935 crops exceeded the value of 1934 crops by 7 per cent. The income derived from crop production of 1935 was expected to total about \$3,400,000,000, nearly 12 per cent over returns from the 1934 crops, and the income from livestock and livestock products was expected to approach \$4,230,000,000, an increase of 16.6 per cent. Benefit payments received by farmers in 1935 were less than in 1934 but farmers' income from production and benefit payments combined was expected to total \$8,110,000,000, nearly 12 per cent over 1934.

The 1935 wheat crop of the United States was estimated at 603,199,000 bu., 21 per cent above last year's very short crop of 496,929,000 bu., but 30 per cent below the 1928-32 average production of 860,570,000 bu. The total acreage harvested in 1935 of 49,826,000 acres compared with 42,249,000 acres harvested in 1934 and the 1928-32 average of 59,885,000 acres. The acreage harvested and the total production were for winter wheat 31,000,000 acres, 433,447,000 bu.; durum 2,644,000 acres, 26,777,000 bu.; and other spring wheat 16,182,000 acres, 142,975,000 bu. The 1935-36 wheat production of 47 countries which produced the greater part of the 1934-35 world wheat crop, exclusive of Russia and China, was officially estimated to total 3,363,039,000 bu. compared with 3,351,607,000 in 1934-35. The Canadian wheat crop amounted to 273,971,000 bu. versus 275,849,000 in 1934. The 1935-36 production in 30 European countries was reported at 1,546,413,000 bu. versus 1,535,056,000 in 1934-35. See WHEAT.

The corn crop in 1935, estimated at 2,202,852,000 bu., was 60 per cent larger than the short crop of 1934 and 14 per cent below average production of the five years, 1928-32. The total acreage, 92,727,000 was 5.6 per cent over that of 1934, 87,795,000 acres, whereas the five-year average was 102,768,000 acres. The yield per acre averaged 23.8 bu., compared with 15.7 in 1934 and 25.7 bu. the 10 years (1923-32) average. Corn produced for grain was estimated at 1,923,559,000 bu., and the remainder of the corn crop was used for silage, fodder, hogging, and grazing. Corn production in 14 foreign northern hemisphere countries amounted to 604,284,000 bu., about 17 per cent below the crop from the same countries last year. Eight European countries reported a total of 501,697,000 bu. versus 562,058,000 in 1934. See CORN.

The oats crop of 1935 was estimated to be 1,195,435,000 bu., more than double the extremely light production of 525,889,000 bu. in 1934 and harvested from 39,714,000 acres, compared with 30,172,000 acres in 1934 and 1.8 per cent below the five-year (1928-32) average production. The yield per acre averaged 30.1 bu. versus 17.4 bu. in 1934 and 30.3 bu. the 10 year average. Oats production in 29 northern hemisphere countries accounting in 1934 for nearly all of the world total, excluding Russia and China, amounted to 3,182,625,000 bu. in 1935 compared with 2,453,451,000 in 1934, and that of 24 European countries 1,517,116,000 bu., a decrease of about 3 per cent from 1934. The Canadian crop was estimated at 442,392,000 bu. See OATS.

Barley production in 1935 was estimated to total 292,249,000 bu. raised on 12,858,000 acres averaging 22.7 bu. per acre compared with 118,348,000 bu. on 7,095,000 acres averaging 16.7 bu. in 1934. The increased production in 1935, which slightly exceeded the 1928-32 average, was the result of increased acreage and appreciably higher yield per acre. The barley crop in 36 northern hemisphere countries was estimated to be 1,304,440,000 bu., ver-

sus 1,173,374,000 bu. in 1934. The crop in 25 European countries reporting showed a total of 635,893,000 bu., and in Canada 94,550,000 bu. See BARLEY.

The 1935 rye crop of 57,936,000 bu. was the largest crop since 1924 and was produced on 4,063,000 acres compared with the extremely small crop of 16,045,000 bu. on 1,942,000 acres in 1934. Rye averaged 14.3 bu. per acre in 1935 and 8.3 in 1934. The crop in 1935 in 30 countries reporting, accounting for the greater part of the world production of rye, except Russia and China, was estimated to total 962,340,000 bu. against 926,120,000 bu. in 1934. Buckwheat production totaled 8,234,000 bu. from 496,000 acres versus 9,042,000 bu. from 478,000 acres in 1934. Rice made 38,452,000 bu. on 784,000 acres, compared with 38,296,000 bu. harvested from 781,000 acres in 1934. See RYE, RICE.

Flaxseed production in 1935 totaled 14,931,000 bu. from 2,071,000 acres as compared with 5,213,000 bu. and 969,000 acres in 1934. Most of the increase in acreage in 1935 occurred in the Dakotas. Grain sorghums produced an estimated equivalent of 103,494,000 bu. from 10,470,000 acres versus 34,542,000 bu. from 7,569,000 acres in 1934. The portion of the acreage harvested for grain produced 57,045,000 bu. versus 18,558,000 bu. in 1934. The record acreage planted was due to the great need for feed in the dry lands of the Central and Southern Plains. Broomcorn production in 1935 amounted to 60,500 tons from 489,000 acres, compared with 32,000 tons from 302,000 acres in 1934.

Production of sorghum (sorgo) sirup in 1935 amounted to 12,438,000 gal.; sugar-cane sirup, 24,699,000 gal.; maple sugar, 1,704,000 lb.; and maple sirup, 3,377,000 gal. The sugar-beet crop of 1935 was estimated at 7,984,000 tons of beets from 771,000 acres, expected to produce about 1,170,000 tons of sugar, compared with the five year (1928-32) average production of 8,118,000 tons of beets from 717,000 acres. In 1935, acre yields were about average whereas the sugar content was reported to be about 10 per cent better than average. The area of 258,000 acres of sugar cane in Louisiana harvested for sugar, sirup, and seed was expected to produce 291,000 tons of sugar, 57,000 tons more than in 1933, 21,034,000 gal. of molasses, and 6,598,000 gal. of sirup.

The 1935 hay crop of 87,620,000 tons which included 75,619,000 tons of tame hay and 12,001,000 tons of wild hay, was 54 per cent more than the exceedingly small crop of 57,028,000 tons in 1934, and 9 per cent above the 1928-32 average of 80,384,000 tons. Harvested acreages of both wild and tame hay rose from the low figures of 1934, with decreases in acreages of clover and timothy, sweet clover, grain hay and annual legumes more than offset by increases in acreages of alfalfa and lespedeza. The acreage harvested totaled 64,488,000 acres. The principal factor in the large production of hay in 1935 was the high yield per acre of certain important kinds. The important kinds of tame hay produced included alfalfa, 29,066,000 tons, clover and timothy, 26,611,000 tons; sweet clover, 663,000 tons; lespedeza, 1,214,000 tons; annual legume hay, 5,862,000 tons; grain hay, 5,009,000 tons; sweet sorghum forage, 5,536,000 tons and other hay crops, 7,194,000 tons. The production of the principal hay seeds in 1935 was lower than in 1934 with the exception of timothy and alfalfa seed. See HAY.

The potato crop was estimated at 356,406,000 bu. compared with 385,421,000 bu. in 1934 and the average acre yield 109 bu. versus 116.4 in 1934. The sweet potato crop was estimated to be 69,853,000 bu., peanuts harvested for picking or threshing at

1,264,455,000 lb., cowpeas harvested for peas, 5,816,000 bu., and soy beans harvested for beans, 39,637,000 bu., more than double the previous record production of 18,627,000 in 1934. See POTATOES.

Tobacco production in 1935 was estimated at 1,283,742,000 lb., about 23 per cent larger than the 1934 crop, from 1,458,000 acres, an increase of 15 per cent. The increase was accounted for mainly by an increase of about 230,000,000 lb. or about 41 per cent in the production of flue-cured tobacco. Flue-cured tobacco was estimated at 785,993,000 lb. compared with 556,930,000 lb. in 1934; fire-cured, 120,887,000 lb.; burley, 234,361,000 lb.; Southern Maryland, 26,350,000 lb.; dark air-cured, 33,871,000 lb.; cigar filler, 42,530,000 lb.; cigar binder, 32,090,000 lb.; and cigar wrapper, 7,485,000 lb. See TOBACCO.

The United States cotton crop in 1935, according to December 1 estimates, was 10,734,000 bales, about 1,098,000 bales greater than the small 1934 crop, and 3,932,000 bales, or 26.8 per cent below average production in the period 1928-32, and the cotton was harvested from 27,331,000 acres, about 1.3 per cent greater than in 1934. The yield of lint per acre averaged 188 lb. in 1935 and 170.9 in 1934. The farm value of the lint was estimated at \$593,677,000 and the 4,775,000 tons of seed at \$150,877,000. Exports of cotton during the cotton year ended July 31, 1935, totaled 4,798,539 running bales compared with 7,534,415 in the previous year. See COTTON and articles on other individual crops.

Agricultural Adjustment. The Agricultural Adjustment Administration (AAA) continued in 1935 with Chester C. Davis as administrator. This organization, according to M. L. Wilson, assistant Secretary of Agriculture, had been one of the most significant institutions established in the history of American agriculture. It provided a means for farmers to work together in meeting the problem of extremely low prices and markets sharply reduced through the loss of impoverished foreign customers, high tariffs, quota, and other restrictions to international trade. It improved the purchasing power of farmers and improved the market for the nation's industries through increasing the buying power of rural people. The immediate effects would not provide a true measure of either the accomplishments or the planning of the Adjustment Administration. In fact, except for the lack of assurance of a balance between supplies and requirements for farm products in the future, most lines of agricultural production from the standpoint of income were currently relatively favorable, due to a very large extent to the Adjustment Administration and the cooperation of more than three million farmers in the programme.

The year 1935 was featured by a number of important amendments to the Act, approved Aug. 4, 1935; a reorganization of the administration; greater flexibility in and a number of modifications in programmes (see below); cooperation with State agricultural experiment stations in efforts toward a regional approach to adjustment programmes; and widespread litigation in the courts questioning the constitutionality of the AAA programmes, with suits restraining the collection of processing taxes. On Jan. 6, 1936, the Adjustment Act was declared unconstitutional by the Supreme Court of the United States, and on Jan. 13, 1936, the Supreme Court ruled that impounded processing taxes, \$180,000,000, as of Dec. 31, 1935, should be returned to processors. See THE NEW INTERNATIONAL YEAR BOOK for 1933

(pp. 20-21) and 1934 (pp. 17-20) for details of organization and earlier activities.

Expenditures and Receipts. The AAA reported that during the 1935 fiscal year it expended a total of \$807,686,134, including \$563,438,812 in rental and benefit payments to farmers under adjustment contracts in five commodity programmes; \$12,591,001 for removal and conservation of surplus agricultural commodities; \$148,520,819 for drought relief, food conservation, and disease eradication activities; \$13,704,070 in connection with trust fund operations; \$38,583,642 for administrative expenses; \$30,292,782 for refunds of taxes; and \$737,005 for disbursement expense. The funds available included \$71,572,151 in processing tax receipts available July 1, 1934, and \$281,565,270 from appropriations and trust funds; and additions of \$526,222,358 in processing tax collections, and \$111,924,702 from appropriations, trust funds, and other sources. Rental and benefits during the fiscal period included cotton, \$116,195,930; wheat, \$98,223,175; tobacco, \$28,767,914; corn-hogs, \$302,407,647; sugar, \$17,844,145. Removal of surplus operations, involving total expenditures of \$12,591,001 comprised hogs, \$1,426,470; wheat, \$1,087,744; dairy products, \$9,037,240; sugar, \$365,536; and peanuts, \$674,008. Drought relief, food conservation, and disease eradication operations expenditures were \$11,486,937 spent in connection with cattle disease eradication, and \$111,540,027 in the purchase of drought cattle; \$7,709,879 for drought sheep and goats; \$17,780,661 in conservation of adapted seeds in the drought area; and \$3314 in connection with the feed and forage conservation programme. Trust fund operations included \$13,653,325 distributed to producers pooling their excess cotton-tax-exemption certificates for sale to producers with excess cotton, and \$50,745 distributed from a rice trust fund set up under the southern rice marketing agreement.

By commodities the collections from processing taxes, etc., during the year ended June 30, 1935, totaled \$526,222,358 including wheat, \$123,860,932; cotton, \$95,926,302; tobacco, \$32,725,501; corn, \$6,849,630; hogs, \$184,601,009; paper and jute, \$3,221,707; sugar cane and sugar beets, \$71,093,971; peanuts, \$3,571,936; rice, \$29,120; cotton ginning tax, \$1,110,875; and tobacco sales tax, \$3,231,375.

Payments under the various commodity programmes during the calendar year 1935 were estimated as follows: Cotton, \$125,000,000; wheat, \$128,750,000; corn-hog programme, \$249,000,000; sugar, \$50,500,000; tobacco, \$30,000,000; rice, \$6,600,000; and peanuts, \$3,600,000. Including the drought cattle purchase and seed conservation programme, expenditures by the AAA in surplus removal activities amounted to approximately \$203,925,000 by Nov. 1, 1935.

Programmes. Three major types of administrative programmes were administered by the AAA: (1) The processing tax-benefit payment programme, under which excise taxes were levied upon the processing of certain basic agricultural commodities and a sum equal to the proceeds of the taxes appropriated for certain purposes including benefit payments to farmers who voluntarily enter into contracts to adjust acreage; (2) the marketing-agreement and order programme, under which the U.S. Secretary of Agriculture entered into agreements with distributors and handlers of specified agricultural commodities and issued orders binding upon them to prohibit unfair marketing practices, to regulate the marketing of the

PRODUCTION REPORTED BY COUNTRIES IN 1934 AND 1935 OF WHEAT, RYE, OATS, BARLEY, AND MAIZE (CORN) IN BUSHELS^a
[International Institute of Agriculture and U. S. Department of Agriculture]

Country	Wheat	Rye	Oats	Barley	Maize (Corn)
	1935	1934	1935	1934	1935
United States	603,199,000	496,929,000	1,195,435,000	292,249,000	2,202,852,000
Canada	213,971,000	275,849,000	442,392,000	94,550,000	7,765,000
Mexico	10,279,000	10,950,000	..	..	..
Argentina	240,669,000	286,120,000	66,827,000	40,695,000	450,762,000
Chile	31,232,000	35,233,000	4,723,000	3,803,000	256,913,000
Austria	15,590,000	13,308,000	23,128,000	26,008,000	..
Hungary	73,947,000	61,824,000	28,047,000	6,720,000	..
Czechoslovakia	62,094,000	64,629,000	32,139,000	13,540,000	6,102,000
Belgium	13,775,000	50,013,000	17,869,000	24,983,000	82,600,000
Belgium	13,775,000	50,013,000	70,763,000	26,418,000	..
Bulgaria	39,594,000	16,134,000	81,224,000	47,510,000	6,319,000
Denmark	17,925,000	22,222,000	46,159,000	5,052,000	4,609,000
Estonia	15,432,000	6,438,000	55,566,000	4,843,000	..
Finland	2,298,000	6,379,000	5,133,000	12,941,000	39,722,000
France	3,107,000	10,803,000	68,019,000	8,610,000	31,091,000
France	3,252,000	9,064,000	71,994,000	43,899,000	..
Germany	278,763,000	15,545,000	44,189,000	4,401,000	..
Germany	338,511,000	32,984,000	317,484,000	7,951,000	..
Greece	171,700,000	299,501,000	302,060,000	47,986,000	..
Greece	30,864,000	369,967,000	375,634,000	47,986,000	20,983,000
Great Britain	65,166,000	2,466,000	154,107,000	147,156,000	..
Ireland	..	3,031,000	8,818,000	10,518,000	..
Italy	283,454,000	..	127,311,000	32,094,000	..
Italy	283,454,000	67,000	58,460,000	38,127,000	..
Latvia	6,906,000	5,607,000	33,758,000	6,897,000	..
Lithuania	9,593,000	16,056,000	9,187,000	9,318,000	115,197,000
Luxembourg	1,027,000	24,219,000	28,866,000	10,534,000	..
Netherlands	15,921,000	26,331,000	27,404,000	11,076,000	..
Netherlands	15,921,000	548,000	26,163,000	11,663,000	..
Norway	1,707,000	19,788,000	3,133,000	179,000	..
Poland	73,435,000	14,621,000	19,803,000	5,323,000	..
Portugal	15,900,000	460,000	12,146,000	4,546,000	..
Rumania	96,438,000	251,246,000	5,870,000	5,307,000	..
U.S.S.R.	..	4,913,000	175,730,000	65,616,000	2,982,000
Spain	153,942,000	12,724,000	7,691,000	2,024,000	..
Sweden	23,185,000	792,488,000	40,904,000	42,021,000	188,949,000
Switzerland	7,604,000	21,567,000	..	..	..
Yugoslavia	73,100,000	17,322,000	51,807,000	91,068,000	28,448,000
Turkey	90,094,000	20,674,000	84,835,000	9,650,000	..
British India	363,029,000	1,242,000	1,439,000	465,000	..
Korea	8,957,000	7,688,000	22,972,000	17,248,000	99,000
Manchuria	34,992,000	11,055,000	10,939,000	18,829,000	202,912,000
Japan	48,721,000	9,590,000	..	18,460,000	19,255,000
Syria and Lebanon	..	..	..	..	..
Algeria	31,158,000	..	..	..	..
Egypt	43,221,000	..	..	..	..
Morocco (French)	17,787,000	25,000	..	..	..
Tunis	17,269,000	..	..	..	..
Australia	133,480,000	..	1,371,000	6,899,000	9,688,000
New Zealand	5,933,000	..	1,378,000	18,372,000	..
Union of South Africa	15,343,000	..	2,563,000	505,000	..
Union of South Africa	15,343,000	..	3,900,000	677,000	62,929,000
Union of South Africa	15,343,000	..	..	..	85,361,000

^a The production given countries of the Southern Hemisphere is for the crop years, 1934-35 and 1933-34.
 Where no figures are given, statistics are not available

commodities, and in the case of milk and its products to fix minimum prices to be paid by distributors to producers; and (3) the Bankhead Cotton Act, the Kerr Tobacco Act, and the Potato Act of 1935, which authorized marketing allotments and imposed a special tax on the marketing of the commodity in excess of allotments.

Contracts accepted by the AAA as of Oct. 15, 1935, by commodities, totaled 7,198,441, including cotton, 3,258,997; corn-hogs, 1,912,520; wheat, 1,410,129; tobacco, 513,407; peanuts, 10,532; rice, 8274; and sugar (cane and beet), 84,582. The signers were organized in some 4200 county production control associations. In a series of six referenda, a total of 4,256,439 producers' votes were cast, with 86.8 per cent favoring continuation of the various programmes and measures.

Cotton. Three crops of cotton were produced in the United States under AAA adjustment programmes, and the AAA offered new contracts to cotton growers covering a four-year period beginning with the 1936 crop. The programmes removed from production about 10,500,000 acres in 1933, 14,600,000 in 1934, and 14,500,000 in 1935, and each reduced the world carry-over of American cotton. The average farm price rose from 6.5 cents per lb. in 1932-33 to 12.4 in 1934-35. Farm income from cotton and cotton seed, including rental and benefit payments, was estimated at \$839,000,000 in 1934-35 and \$862,000,000 in 1933-34, versus \$464,000,000 in 1932-33, the season preceding AAA crop adjustment. Indications were that figures for 1935-36 would show a still further increase, constituting the largest gross income from cotton and cotton seed since 1930. Rental and benefit payments to co-operating cotton growers totaled \$112,600,000 in 1933-34 and \$115,800,000 in 1934-35, and were expected to amount to probably \$125,000,000 in 1935-36. Operation of the Bankhead Act was continued for 1935-36 after results of a referendum to growers. See COTTON.

Wheat. Commencing in the crop year 1933, approximately 800,000 farm operators and landlords, organized in 1328 wheat-production-control associations, participated in efforts to apply the principle of cooperative action to adjustment of wheat production. Since 1933 the wheat surplus was reduced, prices in the United States maintained levels substantially above world prices, and the cash income received by wheat producers, including adjustment payments for the 1934 crop, was practically double the cash income for the 1932 crop. The farm value of the 1935 crop of 603,199,000 bushels was estimated at \$505,394,000 and payments under the various programmes at \$128,750,000. The wheat-allotment contract, approved in the summer of 1933, provided for a maximum downward adjustment of 20 per cent in seedings. Because of the drought of 1933 and 1934 and the rust epidemic of July, 1935, adjustments of such magnitude were not warranted, and consequently, required adjustments for the 1934, 1935, and 1936 crops were 15, 10, and 5 per cent, respectively; and furthermore, the requirements as to use of contracted or adjusted acreage were modified to offset in part the shortage of livestock feed due to drought. About 89 per cent of the wheat producers endorsed the principles of the wheat-adjustment programme in the referendum held May 25, 1935.

Tobacco. The AAA entered into adjustment contracts in 1934 with approximately 275,000 tobacco growers in continental United States and 10,500 growers in Puerto Rico, and covering about 88 per cent of the land usually in tobacco. The re-

sulting adjustment in tobacco production reduced the excess stocks on hand by about one-third. Income to producers from tobacco in 1934 more than doubled that of 1932, not including benefit payments. With benefit payments of \$43,136,000 included, the total income from the crop was \$266,315,000, compared with a 10-year average (1919-28) of \$270,602,000. The 1934 contracts were continued in 1935. Referenda by growers in 1935 favored a tax on the sale of tobacco for the crop year beginning May 1, 1935, as provided in the Kerr Tobacco Act, and favored the continuation of the programme. In the 1935 amendments to the Agricultural Adjustment Act, Congress fixed the processing taxes on tobacco at the rates then in effect but made provision for certain changes to correspond with changes in tobacco prices; and accordingly certain adjustments were made effective Oct. 1, 1935.

Sugar. The sugar programme made possible by the Jones-Costigan amendment to the Agricultural Adjustment Act sought to assure for domestic producers a fair share of the domestic market through a quota system, and to supplement the income of producers by benefit payments for their cooperation in adjusting production. During the year and a half that the sugar plan was in effect, surplus sugars in the continental United States and insular areas were eliminated. Adjustments in production were made in the domestic sugar areas as well as in the principal United States insular areas supplying sugar to this country. The principal curtailment of surplus was in the Philippine Islands. The income of producers generally was increased, and in localities of the United States sugar-beet area where the 1934 drought drastically reduced production, benefit payments under the sugar-beet programme were of unusual importance in maintaining farmers' income. These results were achieved without materially increasing the cost to consumers.

Income for approximately 70,000 producers co-operating in the sugar-beet programme, including benefit payments, amounted to nearly \$57,000,000. Louisiana producers signed approximately 9000 adjustment contracts, and their 1934 cash income was about \$16,000,000 versus \$11,000,000 in 1933. Sugar producers of Florida and sugar-cane sirup producers also derived benefits from the act under separate programmes. In the insular areas similar adjustment programmes were effected. Benefits to 19,000 Philippine growers for 1934-35 and 1935-36 adjustments approximated \$16,000,000, to 8000 Puerto Rico producers about \$12,000,000 on the 1934-35 crop; and in Hawaii adjustment payments about \$8,750,000 annually in a three-year programme. The insular areas also received benefits under the sugar-adjustment programmes by various expenditures for the benefit of agriculture out of special funds created under the Agricultural Adjustment Act for that purpose.

Rice and Rye. The AAA did not immediately launch a production-adjustment programme financed by processing taxes for rice, but instead it undertook in 1933 to adjust supplies and promote higher prices through marketing agreements. Due to greatly different conditions, the marketing agreement method proved better adapted to the California rice area than to the Southern (Arkansas, Louisiana, and Texas) area. In both areas the agreements helped to control production and raise prices to growers, but difficulties developing in the Southern area indicated that a production programme financed through processing taxes would

be more satisfactory. So in March, 1935, the AAA terminated the Southern marketing agreement. Under an amendment to the Agricultural Adjustment Act, it offered to growers a control programme based on a processing tax and benefit payments for 1935-36.

The 1935 amendments to the Agricultural Adjustment Act called for a production control programme for rye and provided for a processing tax of 30 cents a bushel to be effective from Sept. 1, 1935, until Dec. 31, 1937, unless modified as provided in the legislation. The rye programme developed late in the summer of 1935 was to run parallel with the new wheat contract.

Livestock, Corn-hogs, and Dairy Products. The reduced number of livestock on farms on Jan. 1, 1935, a direct result from the 1934 drought which tremendously reduced pasturage and grain and hay crops, would have been even smaller in 1935 had the AAA not acted in 1934 to prevent excessive liquidation, and to make the inevitable liquidation as orderly as possible. The 1934 and 1935 corn-hog adjustment programme had no appreciable effect on the much reduced 1934 fall and 1935 spring farrowings, the smallness of which primarily resulted from the drought.

Government action in 1934 and early in 1935 for the relief of the cattle industry was participated in by the AAA. More than 8,000,000 cattle were purchased and all animals fit for human use turned over to the Federal Surplus Relief Corporation. This mitigated the effects of the drought by increasing the supply of meat available for 1934, and the purchase programme reduced death losses on farms and ranches and enabled growers to save breeding stock. Due to the cattle-purchase programme, gross returns to cattlemen in 1934, including \$112,000,000 paid by the Government for drought cattle, were probably 75 per cent greater than they would have been otherwise.

In 1935 the AAA offered to farmers a corn-hog programme which restricted the planting of corn but not of other feed crops and it also made a supply of adapted seed available to producers in drought areas. Under the 1935 corn-hog contract, the individual farmer had to retire from corn production from 10 to 30 per cent of his base corn acreage. The benefit payment was 35 cents a bushel for the appraised corn yield. Signers retired in the aggregate 23 per cent of their base corn acreage, or nearly 12,000,000 acres, and about 93,000,000 acres of corn was harvested, compared with the 1928-32 average of nearly 103,000,000 acres. Without a corn-acreage limitation the 1935 corn crop would have created a burdensome surplus; adjustments held corn production more nearly in line with livestock needs.

Prices of dairy products were much higher in 1934 and 1935 than in 1932 and early in 1933. Demand conditions improved in 1933, marketing agreements and licenses under the Adjustment Act exerted a steadying influence, and government purchases of dairy products for relief distribution removed stocks from trade channels. A programme involving benefit payments for cooperative adjustments in dairy production, offered in April, 1934, was withdrawn, and the industry continued to rely on marketing agreements which dealt only with existing supplies of milk and milk products.

Other Activities. The consumers' counsel in the AAA continued to work for consumer protection and education. The counsel participated in the formulation of marketing agreements and basic commodity programmes, emphasizing in such work

the necessity of insuring a normal and adequate food supply for consumers.

Activities of the AAA in the several crop and livestock programmes noted above, drought relief, protection of consumers, and general and economic farm recovery, and its relations to foreign trade, farm imports and exports, farm income, land utilization, and soil conservation, and other related problems of American agriculture were treated in detail in *Report of the Secretary of Agriculture, 1935*; and *Agricultural Adjustment in 1934*; *A Report of Administration of the Agricultural Adjustment Act, February 15, 1934, to December 31, 1934*. See also *News Digest (A.A.A.)*; *Consumers' Guide, Land Policy Review*, and general and commodity informative material of the AAA (all U.S. Dept. of Agriculture).

Farm Credit Administration. The Farm Credit Administration, headed by Gov. William I. Myers, and institutions operating under its supervision, continued to provide a coordinated credit system for agriculture. The permanent institutions operating under its supervision included the Federal land banks, national farm loan associations, production credit corporations, production credit associations, Federal intermediate credit banks, and banks for cooperatives, including the Central Bank for Cooperatives. The regional agricultural credit corporations and emergency crop and feed loan offices, also under its jurisdiction, were expected to be of a relatively temporary character, established to meet a passing emergency. For earlier activities and details of organization see *THE NEW INTERNATIONAL YEAR BOOK* for 1933 (pp. 21-23) and 1934 (pp. 20-21).

The total of all loans from Farm Credit Administration institutions in 1935 aggregated \$1,070,000,000 compared to \$1,836,000,000 in 1934. Long-term real estate mortgage loans by the Federal land bank and commissioner amounted to \$440,000,000 compared to \$1,284,000,000 in 1934; short-term production loans, \$517,000,000 compared to \$446,000,000, and loans to farmers' business cooperatives \$113,000,000 compared to \$106,000,000.

Credit advanced to farmers and farmers' cooperative associations by the institutions in this group from May 1, 1933, through Dec. 31, 1934, totaled \$2,379,063,000, of which \$1,835,740,000 was loaned during 1934. Of the total advanced since May 1, 1933, about \$1,500,000,000 was farm mortgage loans, more than \$689,000,000 short-term production credit, and nearly \$195,000,000 advances to cooperative purchasing and marketing associations. Federal land banks made first mortgage loans on farm real estate aggregating \$870,506,000, and mortgage loans from the Land Bank Commissioner's fund, appropriated to supplement the Federal land bank refinancing programme, totaled \$623,948,000. Loans and discounts outstanding on Dec. 31, 1934, amounted to nearly \$3,000,000,000 as compared with approximately \$1,600,000,000 of outstanding balances for those institutions existing on Apr. 30, 1933, the last month-end prior to the establishment of the Federal credit administration. Of the amount outstanding on Dec. 31, 1934, \$2,513,240,000 represented farm mortgage loans, \$313,812,000 short-term production loans, and the remaining \$116,683,000 advances to farmers' cooperative associations.

Farmers borrowed \$210,000,000 of the total amount of short-term loans aggregating \$517,000,000 from the production credit associations; \$89,000,000 from regional agricultural credit corporations; \$122,000,000 from other institutions

discounting with the Federal intermediate credit banks; and \$96,000,000 from emergency crop and feed loan offices. The larger amount of short-term production credit extended during 1935 was attributed in part to the gradual expansion of the work of the cooperative production credit association. Production credit associations, numbering 560, doubled their volume of business in most sections of the country. The heavy demand for these loans indicated, according to Governor Myers, that the time is approaching when hundreds of millions of dollars of merchant credit and time purchases obtained by farmers each year will be shifted to cash financing through production credit associations, banks, and other institutions equipped to handle farmers' short-term needs on a business basis at a reasonable cost.

The Federal land banks and commissioner continued to be the main source of farm real estate mortgage loans during 1935; but most of their loans currently represented normal financing in contrast to the emergency demands of 1933-34. Federal land banks loaned on their account in 1935 approximately \$245,000,000, far below the volume loaned in 1934 under the emergency refinancing programme but much larger than the amount in 1933 or in any other year of the land banks' history. First and second mortgage loans by the land bank commissioner aggregated \$195,000,000 in 1935 against \$553,000,000 in 1934. The emergency refinancing of farm debts decreased rapidly with the improvement in farm conditions, yet the demand for real estate mortgage loans to finance the purchase of farms increased noticeably. The move toward farm ownership was encouraged considerably by provisions of the Farm Credit Act of 1935 that commissioner's loans, used hitherto for refinancing, could also be made to finance the purchase of farms in amounts up to 75 per cent of the value.

A substantial part of the outstanding bonds of the Federal land banks was refunded during 1935 at lower rates, and accompanying this, the contract interest rate on new loans through national farm loan associations was dropped gradually from 5 to 4 per cent per annum—the all-time low point. As a result, many farmers shifted their mortgages to the land banks. Approximately \$625,000,000 of bonds of the Federal land banks bearing from 4 to 5 per cent interest had been refunded since mid-1934 at rates ranging from 3 to 4 per cent. Part of a \$100,000,000 issue of December 10, 1935, was being used for new loans, thus marking the return of land banks to the investment market after a five-year period, and the discontinuance of use of Government-guaranteed bonds of the Federal Farm Mortgage Corporation which were exchanged for land bank bonds for about a year and a half. The land banks expected in the future to continue to draw funds for new financing from the investment market. The remaining purpose of the Federal Farm Mortgage Corporation was to provide funds for commissioner's loans and to collect loans outstanding. Of the total bond authorization of the corporation, amounting to \$2,000,000,000, an amount aggregating \$1,387,000,000 was outstanding on Nov. 30, 1935. Farm real estate sales by the Federal land banks during 10 months of 1935, including over 6400 farms and over 1000 parts of farms, amounted to \$22,154,000, compared to \$17,600,000 for the entire year 1934 and \$14,113,000 in 1933, respectively. Farm real estate held by the banks on Oct. 31, 1935, amounted to \$95,816,000.

Farm loan collections were headed toward normal conditions during 1935. Interest collections on

Federal land bank loans for the first 11 months of the year aggregated over \$61,000,000, which was about 90 per cent of the \$68,000,000 of interest maturing during the period, compared with collections of \$50,000,000 interest in corresponding months of 1934 or 87 per cent of the amount maturing.

More of the credit business of farmers' cooperative marketing and purchasing organizations was done in 1935 by the 13 banks for cooperatives, which loaned around \$66,000,000 versus \$40,000,000 in 1934. Farmers' business cooperatives in 1935 also borrowed \$44,000,000 from the Federal intermediate credit banks on the security of warehouse receipts, which slightly exceeded the amount in 1934. Loans and discounts of the Federal intermediate credit banks for production credit associations, regional agricultural credit corporations, and other financing institutions approached \$350,000,000.

The Farm Credit Act of 1935, signed by President Roosevelt on June 3, 1935, reduced the interest rate on Federal land bank loans. Effective for one year beginning July 1, 1935, interest payable on all Federal land bank loans made through national farm loan associations will be charged at the reduced rate of $3\frac{1}{2}$ per cent as provided in the act. Interest payable in the two years beginning July 1, 1936, will be reduced to 4 per cent; after this period the rate will be that stipulated in the original loan contracts. The act also enabled the land bank commissioner to make first and second mortgage loans to farmers to finance the purchase of farms. The act also broadened services offered by the banks for cooperatives by reducing interest charged on loans secured by commodities, by permitting the rediscounting of such loans with the Federal intermediate credit banks, and by allowing the banks to make loans on security of physical facilities to farmers' cooperative associations engaged in purchasing farm supplies. Cooperatives supplying farmers with various business services were now eligible to borrow from the banks as well as those engaged in marketing farm commodities or purchasing farm supplies.

Credit Unions. The Federal Credit Union Act of 1934 designated the Farm Credit Administration to charter and supervise unions organized under the Act, but not to provide them with capital or loanable funds. C. R. Orchard, director of the Credit Union section, reported that 826 Federal charters for these cooperative thrift and loan associations were granted during 1935, and nearly 600 additional credit unions were chartered under State laws—a total surpassing all previous records. Small groups of factory and office employees and community groups have organized altogether 904 Federal credit unions in addition to approximately 3000 now operating under State charters. Federal credit union activity brought new life to the 25-year-old credit union movement in the United States. About 100,000 men and women, members of the new Federal credit unions, saved over \$2,000,000 during 1935, and all-told Federal and State credit unions comprised about 800,000 members with savings of more than \$50,000,000.

Consult also *Second Annual Report of the Farm Credit Administration, 1934 (1935)*; *Cooperative Purchasing of Farm Supplies*; *Agricultural Financing Through the Farm Credit Administration*; *Loans to Farmers' Cooperatives*; *Helping the Farmer Pay His Debts*; and *Permanent Cooperative Credit for Agriculture* (all published in 1935 by the U.S. Farm Credit Administration); *Activities and Operations of the Federal Farm Board*,

Senator McNary, et al (U.S. Senate Rpt. 1456 (1935), 74th Congress, 1st session).

World Agriculture. Some of the activities and movements in foreign countries either affecting or which might affect American agriculture in its world trade relations in some way included the British hog and bacon marketing plan, and beef and milk products import restriction programmes; the French wheat law of Dec. 24, 1934, and other changes in wheat legislation, and agricultural credit conditions in France; the treatment of agriculture in the reciprocal trade agreement concluded with Sweden; the agricultural credit situation in Italy; the German food situation; the increase in pork production and trade in Czechoslovakia; U.S.S.R. harvesting and procurement measures, and the abolition of the bread card system in the Soviet Union; the progress of cotton production in China; dairying in Argentina, and improvement in the quality of Argentine wheat; and agriculture in the Canadian trade agreement, the expansion of agricultural marketing control in Canada, and the new Canadian wheat law. The foregoing activities and factors; the wheat and flour situation in China and Manchuria; the soybean situation in Manchuria; agricultural conditions in the Soviet Union; the cotton situation in India; bread-grain consumption and trade in the British Isles, France, Germany, Hungary, Italy, Poland and Finland, and Switzerland; the Hungarian hog and pork industry; Mediterranean olive oil production; cotton versus coffee in Brazil; the world situation in feed grains, cattle and beef, hogs and pork, and sugar; agriculture in the foreign trade of the United States; United States trade with Cuba in lard and cottonseed oil; United States balance of international payments; United States imports of competitive agricultural products; United States agricultural and industrial exports; index numbers and trends in value of United States agricultural exports and United States trade with the territories were discussed in detail during the year in *Foreign Crops and Markets* and in other publications of the U.S. Department of Agriculture. See the respective countries under *Agriculture or Production*.

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AGRICULTURE, U.S. DEPARTMENT OF The Department of Agriculture during the fiscal year ended June 30, 1935, continued vigorously the pursuit of its regular work as well as its emergency activities. Scientific research, the principal function of the Department, was carried on to give expression to further results in the solution of farm and home problems and the emergency work was pursued, aside from its mandatory aspects, with a view to arriving at a permanent yet flexible agricultural adjustment and to bringing the farm into economic harmony with other industries in the production and use of our national wealth. In his annual report the Secretary of Agriculture, in addition to reviewing the regular activities engaging the Department, dealt with farm recovery in

relation to general recovery, foreign trade, farm income, agricultural credit, farm land values, land use, soil conservation and allied subjects in their bearing on this general problem.

Important changes in the organization of the Department included the establishment as a separate agency of the Office of Personnel theretofore a part of the former Office of Personnel and Business Administration, the organization at the close of the year of two new units, a Vitamin Division and a Pharmacological Division in the Food and Drug Administration, and since the close of the fiscal year a reorganization of the Forest Service by consolidating the eight former branches into four major groups covering national forest administration, state and private forestry cooperation, operation and information, and research. On Mar. 25, 1935, the Soil Conservation Service was transferred from the Department of the Interior to the Department of Agriculture. The Resettlement Administration was placed under the direction of Under Secretary of Agriculture Rexford G. Tugwell.

On June 30, 1935, the Department had under appointment 44,080 persons or 5457 more than at the close of the preceding fiscal year. The force of the Agricultural Adjustment Administration was increased during the year from 5152 to 6136 employees and the Soil Conservation Service which transferred 1272 employees from the Department of the Interior increased this number by the close of the year to 1853. On June 1, 1935, 1670 employees of the Agricultural Adjustment Administration were transferred to the Resettlement Administration. The largest number of employees in the Department during the World War period was 25,239 on July 1, 1918. The number of appointments during the fiscal year 1935 was 29,092 and the number of separations from the service 23,635 as compared with 31,434 appointments and 19,355 separations in 1934.

Changes in personnel during the fiscal year and since its close included the appointment of P. V. Cardon, Director of the Utah Agricultural Experiment Station, to succeed A. J. Pieters, at the age of retirement, in charge of forage crop investigations and of Ira N. Gabrielson, consulting specialist and Assistant Chief of the Division of Wildlife Research, to succeed as Chief of the Bureau of Biological Survey Jay N. Darling who relinquished this position on Nov. 15, 1935, to resume his work as a cartoonist. L. H. Dewey, botanist in charge of investigation of flax as a fibre crop reached the age of retirement during the year. Robert M. Chapin was made Chief of the Biochemic Division of the Bureau of Animal Industry as successor to Marion Dorset who died July 14, 1935. J. A. Emery Assistant Chief and later Acting Chief of the Biochemic Division died July 28, 1935. Charles E. Kellogg was appointed Chief of the Soil Survey Division of the Bureau of Chemistry and Soils to fill the vacancy caused by the death of Curtis F. Marbut on Aug. 25, 1935. Since the close of the fiscal year Seth Thomas resigned as Solicitor of the Department and Mastin G. White was appointed as his successor. William F. Callander in charge of the Division of Crop and Livestock Estimates of the Bureau of Agricultural Economics was made Assistant Administrator of the Agricultural Adjustment Administration and Joseph A. Becker was appointed to fill the vacancy created by the transfer. M. D. Waite in charge of Fruit Disease Investigations, C. L. Shear, head of the Division of Mycology and Disease Survey, Wil-

liam Stuart in charge of Potato Investigations, E. C. Shorey at the head of Biochemical Investigations of Soils and Fertilizers and David Fairchild, agricultural explorer, were retired during the year. A. S. Hitchcock, head of Grass Investigations, died Dec. 16, 1935.

The regular appropriations of the Department for the fiscal year 1935 amounted to \$75,332,563. In addition about \$120,000,000 of the 1936 road fund authorizations were obligated in 1935 as provided by law. The emergency appropriations and allocations including balances brought forward from prior years were as follows: Road funds \$413,684,741, Agricultural Adjustment Administration \$1,014,645,969, National Industrial Recovery Act \$28,545,415, Emergency Appropriation Act, 1935, \$23,748,536, Emergency Relief Appropriation Act of 1935, \$43,650,000 and Puerto Rico and Hawaii trust funds \$2,568,000, a total of \$1,602,175,224, of regular and emergency appropriations.

AIR. See PHYSICS.

AIR MAIL. See AERONAUTICS; UNITED STATES under Congress.

AIRSHIPS. See AERONAUTICS.

AKRON, THE UNIVERSITY OF. A coeducational institution of higher learning in Akron, Ohio, founded in 1870 as Buchtel College and taken over by the city and renamed in 1914. There were enrolled in the summer session of 1935, 316 students. For the autumn day session the enrollment was 1383 and for the autumn evening session, 1137. The faculty numbered 90. In 1935, there was a change in the organization of the University as it affects the classification and grouping of students. All of the work of the first two years is given in a unit called the General College. For promotion to the Upper College a quality requirement is imposed. The endowment amounted to \$149,341, while the income for the year, including tax levy from the city, was \$256,749. The library contained 41,157 volumes. President, Hezleton E. Simmons, Sc.D.

ALABAMA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,646,248; July 1, 1934, by latest Federal estimate, 2,710,000; 1920 (Census), 2,348,174. Montgomery, the capital, had (1930) 66,079 inhabitants; Birmingham, 259,678.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu	Value
Cotton	1915	2,240,000	1,060,000*	\$56,233,000
	1934	2,133,000	950,000*	57,453,000
	1935	3,391,000	44,761,000	31,333,000
Corn	1934	3,425,000	47,950,000	37,880,000
	1935	603,000	391,000*	4,496,000
Hay (tame)	1934	602,000	394,000*	4,925,000
	1935	449,000	314,300,000*	8,800,000
Peanuts	1934	443,000	265,800,000*	7,708,000
	1935	75,000	6,900,000	4,830,000
Sweet potatoes ..	1934	81,000	7,614,000	6,472,000
	1935	38,000	3,230,000	2,261,000
Potatoes	1934	40,000	3,760,000	3,083,000

* Bales. † Tons. ° Pounds.

Mineral Production. Coal mines in the State produced 9,596,000 net tons in 1934, thus surpassing by 9.5 per cent the production of 1933, which had totaled 8,759,989 tons according to revised figures. This proportionate gain for Alabama exceeded the corresponding rise for the entire union, which came to 7.4 per cent. The proportion of Alabama's mined coal used to make coke rose to nearly one-third, from about one-fourth for 1933, and thus accounted for virtually all the increase in 1934's production of coal. The by-product ovens produced

2,109,192 net tons of coke in 1934, as against 1,668,975 in 1933; by value, \$6,508,933 (1934), as against \$3,885,858 (1933).

The iron mines produced 2,343,819 gross tons of ore in 1934, which exceeded by 10 per cent the total for 1933. The production of pig iron rose again, to 1,171,650 gross tons for 1934, from 900,170 for 1933. The blast furnaces' shipments of pig iron, 1,144,900 gross tons for 1934 and 987,606 for 1933, attained the respective values of \$15,805,365 (1934) and \$11,385,090 (1933).

There occurred a small but sharp rise in the mining of gold, to a production of 2781 fine ounces (1934), from a mere 4 ounces in 1933. This was mainly due to the operation of an old working, the Hog Mountain mine in Tallapoosa County, with a new flotation mill.

Education. The legislative session of 1935 passed laws adding some \$3,000,000 to the usual total appropriation of State money for aid to public schools, but it omitted to create all the requisite new revenue, leaving this to a later special session.

Legislation. In order to meet the opportunity offered by the Federal Social Security Act, there was enacted a State system of insurance against unemployment. The question whether to repeal the State's prohibition of alcoholic beverages was submitted to a public referendum held on February 26. A bill for the sterilization of the insane, habitual criminals, and degenerates was passed but was vetoed by Governor Graves, who had secured from the State Supreme Court an advisory opinion that the measure violated the Federal and State constitutions. In order to admit Negroes to the jury lists, in conformity with the ruling of the Federal Supreme Court, an act was passed authorizing jury boards to refill jury boxes immediately.

Political and Other Events. The referendum held on February 26 rejected the proposal to repeal State prohibition. Although Birmingham, Montgomery, and Mobile gave heavy majorities for repeal, the rural vote in favor of retention prevailed.

Two of the seven Negro youths who had been held for retrial according to an earlier order of the Federal Supreme Court were reconvicted and under a State Court's sentence of death for rape at the beginning of the year. The Federal Supreme Court ruled again, in the matter of one of them, on January 7, holding that Negroes had been omitted from jury duty and that consequently the defendant had not had the full equal protection of the law. Further proceedings in the cases awaited the inclusion of the names of Negroes in the boxes from which the names of jurors were drawn. Governor Graves obtained legislation and action on the courts' part designed to make such inclusion universal. The prosecutions were then begun anew. For this purpose a new grand jury was drawn in Jackson County, from a list that included names of Negro citizens. One Negro sat on this grand jury. It found indictments, on November 13, against nine youths accused in the Scottsboro case, charging them with criminal assault on two counts—one as to Mrs. Victoria Price and the other as to Ruby Bates, a former accusing witness who had later recanted her accusation in court and had disappeared.

The State's coal-mining industry was disturbed by the new regulation of wages and hours of work under the Federal Guffey Act; it was asserted that the industry was in peril of ruin through failure to obtain a "differential" allowing a sufficiently lower scale of pay, as against Northern mines.

Officers. The chief officers of the State, serv-

ing in 1935, were: Governor, Bibb Graves; Lieutenant-Governor, Thomas E. Knight, Jr.; Secretary of State, Howell Turner; Treasurer, John Brandon; Auditor, Charles E. McCall; State Superintendent of Education, J. A. Keller.

Judiciary. Supreme Court: Chief Justice, John C. Anderson; Associate Justices, William H. Thomas, Thomas E. Knight, A. B. Foster, Lucien D. Gardner, Virgil Bouldin, Joel B. Brown.

ALABAMA, UNIVERSITY OF. A coeducational State institution for higher learning at University, Ala., founded in 1831. For the autumn term of 1935 the enrollment was 4700; the summer school registration was 2287. The faculty for 1935-36 numbered 275. The productive funds of the university amounted to \$4,389,301, and the income for the year was \$1,123,904. The library contained about 150,000 volumes, of which 20,000 were government documents. President, George H. Denny, Ph.D.

ALASKA. A territory of the United States. Its area is 586,400 square miles; its capital is Juneau. Alaska's population in 1930 was 59,278 (Fifteenth Census); in 1920, 55,036. In 1930 the white population of 28,640 was outnumbered by 29,983 Indians and Eskimos.

Topography. An expedition of the National Geographic Society traveled across the St. Elias Range from a point West of Carcross in the Yukon Territory, charted the course of the Alsek River, and surveyed surrounding mountains. Data on some 2000 square miles of surface said to have previously been unmapped were obtained.

Colonization. The Federal Emergency Relief Administration gathered some 200 families of destitute farming people, chiefly from Michigan, Wisconsin, and Minnesota, and transported them to Alaska early in the season of navigation. Most of them were taken into the Matanuska Valley area, to settle a projected farming community, with the coöperation of the Rural Rehabilitation Corporation of Alaska. They were sheltered in tents, to await the construction of houses, which Federal agencies undertook to have ready for them before winter. Some of the colonists appealed in June to U. S. Senator Couzens, complaining of delay and mismanagement in providing for their needs. Some of their grievances were remedied on July 1 by an inspecting agent of the FERA.

Roads and Transportation. An act of Congress authorized the President to negotiate with the Dominion of Canada for an agreement to provide the construction of an automobile highway from the United States to Fairbanks, Alaska. A commission created by Congress in 1930 had studied the feasibility of the undertaking and had reported favorably.

The Alaska Railroad and its subsidiary lines of boats obtained in 1934 a total revenue of \$1,476,568; it came chiefly from the hauling, by rail, of 109,214 tons of freight, which paid \$1,091,446—some \$10 a ton; 73,060 tons of this freight were coal. It cost \$1,557,563 to operate and maintain the lines; this exceeded revenue by nearly 6 per cent and gave no return on capital.

Some 1898 miles of vehicular roads built by the Alaska Road Commission (part of the Department of the Interior, but administered by the Governor of Alaska) and mainly maintained by the Commission took care of much of the transportation. These roads and a great mileage of trails and some tramway lines had cost, to June 30, 1935, \$21,543,493, chiefly derived from Federal appropriations, but partly from Territorial contribution. The Territory maintained another 200 miles of roads of its own.

The Bureau of Public Roads (Department of Agriculture), in addition maintained a system of roads in the National forests of Alaska. Aeroplanes played an increasing part in transportation, flying 1,685,654 miles in 1935.

Finance. The government of the Territory reported, for the calendar year 1934, receipts of \$1,935,184, disbursements of \$1,800,310, and a remaining balance at the end of the year, of \$516,398. Its receipts included Federal grants for relief of the needy and for aid to schools. The latter came out of the Alaska Fund, a Federal special fund deriving its income from Federal charges for trade and business licenses in the Territory.

Banking and Commerce. The Territorial banks held on June 30, 1935, deposits totaling \$7,440,597; National banks, of \$4,521,683. The external commerce of Alaska with the United States was reported, for the year ended with June 30, 1935, to have exceeded by \$14,520,054 (approximately) that for the year previous; Alaska's favorable balance in this yearly trade reportedly rose to \$29,872,022, from \$18,262,968. An increasing number of tourists, visiting Alaska in 1935, tended to augment business in the Territory.

Fisheries and Sealing. A strike among employees in the salmon-fishing industry somewhat limited the production for 1935, for which the totals were not yet collated. For 1934, the total value of all commercial fish and of whales, taken in Alaskan waters, was \$41,963,293, of which canned salmon furnished \$37,611,950. The Federal Government got from the Pribilof Islands, in 1934, 53,468 skins of fur seals, and there were left 1,430,418 living seals (computed), or 111,850 more than the year before. The Government's sales of Pribilof seal-skins for the year following the kill of 1934 brought in over \$1,000,000.

Mineral Production. The devaluation of the U. S. dollar had the effect in 1934 of rendering Alaska's mineral industry more nearly than in a generation a matter of gold mining. Somewhat fewer ounces of gold were mined in 1934 than in 1933—457,345 as against 469,286; yet the respective yearly total value of the product rose, by reason of an enhanced price, to \$16,007,000 (1934), from \$9,701,000 (1933). The value of the yearly output of gold, as recently as 1927 inferior to that of copper, constituted for 1934, at \$35 an ounce, nearly 96 per cent of the value of all minerals produced in the year. Coal, yielding 107,500 tons, in value \$451,500, ranked second.

Reindeer Husbandry. Gov. John W. Troy in his annual report for 1935 said: "It is evident that reindeer are not as numerous as has been believed." He cited a survey indicating the number of reindeer on ranges to be some 550,000. Native cooperative associations (of Eskimos or Indians), 26 in number, having 3255 "shareholders," had outstanding 286,596 shares of "stock," each share being one putative reindeer; the average shareholder thus owned 88 "shares" and consumed annually nearly 8 of them as dividends. It was recommended that the ownership of reindeer by others than aborigines be gradually brought to an end.

Education. The Territorial Legislature accepted from the Federal Government an offer of \$15,000 a year for spreading vocational education, and it appropriated an equal amount. The Territorial public schools were maintained to the extent of between 70 and 80 per cent of their cost by Territorial grants and by part of the proceeds of the Alaska Fund. Those in organized school districts derived other maintenance through local taxation.

Accredited high schools operated in 10 communities. The Federal Office of Indian affairs maintained, in 1935, 99 schools for members of the native races; these schools had 4299 enrolled pupils and 186 teachers.

ALBANIA, āl-bā'nī-ā. The smallest of the Balkan States, with an area of 10,629 square miles and a population estimated at 1,050,000 on Jan. 1, 1934 (1,003,124 at the 1930 census). Capital, Tirana (30,806 inhabitants in 1930). The other principal towns are Shkoder (Scutari), 29,209; Korçe (Koritsa), 22,787. Reigning sovereign in 1935, King Zog I, who assumed the throne Sept. 1, 1928.

Production. The people are engaged mainly in agriculture and cattle raising. Tobacco, wool, hides, timber, furs, dairy products, fish, olive oil, and corn are the chief products. Yields of the chief crops in 1933 were (in metric tons): Wheat, 64,800; rye, 4600; barley, 8900; oats, 14,300; corn, 111,800; olives, 25,600; and tobacco, 1090. The 1932 wool clip was about 2000 metric tons. Some salt, copper, and bitumen are produced, but the forest and mineral resources remain largely undeveloped. The chief industries are flour milling, cheese making, and olive pressing. An oil field near Berat was under development by the Italian State Railways. A pipeline from the fields to Valona (Vlore) was nearing completion in 1935.

Foreign Trade. Total imports in 1933 were valued at 15,938,000 gold francs (22,815,000 in 1932) and exports were 5,746,000 gold francs (4,500,000 in 1932). Italy, the United Kingdom, Czechoslovakia and the United States were the principal sources of imports, while exports went mainly to Italy and the United States.

Finance. Budget estimates for the fiscal year ended Mar. 31, 1935, placed receipts at 18,888,000 gold francs and expenditures at 18,507,000 gold francs, compared with final comparative returns for 1933-34 of about 22,200,000 and 21,100,000 gold francs, respectively. The foreign public debt on Mar. 31, 1932, totaled 68,200,000 gold francs. Albania borrowed 50,000,000 gold francs from Italy in 1925 and in 1931 agreed to accept a subsidy to a maximum amount of 10,000,000 gold francs annually for ten years, giving Italy certain political and economic concessions in return. The gold franc was equivalent to \$0.193 in old U. S. gold dollars of 1.50463 grams.

Communications. Albania in 1934 had 1120 miles of highways suitable for motor traffic, a railway line 22 miles long from Tirana to the port of Durres (Durazzo), and seven air routes linking Tirana with Rome and with various Balkan cities. Inauguration of bus service between Korçe, Albania, and Bitolj, Yugoslavia, in 1935 gave central and southern Albania a shorter means of transportation and communication with central and western Europe.

Government. Under the Constitution of 1928, executive power is vested in the King and a council of ministers appointed by him. There is a legislative assembly of 58 members elected indirectly.

History. The close political cooperation between the Albanian and Italian Governments, interrupted during 1933 and 1934 by nationalistic and anti-Italian legislation and agitation in Albania (see NEW INTERNATIONAL YEAR BOOK for those years), was resumed in 1935. The inclusion of Albania in the scheme for Italo-Yugoslav rapprochement inaugurated early in 1935 (see ITALY and FRANCE under *History*) and the financial difficulties of King Zog's government contributed to this development. On Sept. 7, 1935, Rome officials

announced that Italy would resume her yearly loans of 10,000,000 gold francs, called for in the Albanian-Italian agreement of 1931 but withheld in 1933-34 in order to bring pressure upon King Zog. The development of Italian political and economic interests in Albania was further encouraged by a grant of 60,000,000 lire advanced by the Italian Government to an Italian company organized for the economic exploitation of Albania. On October 16, coincident with his acceptance of the Evangheli Cabinet's resignation, King Zog announced to the National Assembly that Albania could not join the other League members in applying economic sanctions against Italy, her close friend and ally. A new cabinet was formed October 21 under Mehdi Frasherî.

Resentment at King Zog's subservience to Italy was believed the chief motive for the revolution which broke out at Fieri in southern Albania on August 15. The movement started with the assassination near Valona of Gen. Leon de Ghilardi, Inspector-General of the Army and King Zog's right-hand man, whose rôle of chief intermediary between Rome and Tirana made him both hated and feared by Albanian nationalists. The extent of the uprising was veiled by the strict Albanian censorship, but reports stated that 60 were killed in the fighting and 300 prisoners were taken before the revolt was crushed. Of several hundred conspirators tried by court martial, 16 were executed and nearly 50 others were sentenced to death. Through the intervention of foreign diplomats, the King on September 22 commuted the death sentence of those awaiting execution, with one exception, and ordered the rebels imprisoned for varying terms.

In 1934 the Greek Government had appealed to the League of Nations, protesting the action of the Tirana Government in refusing to permit persons recruited in Greece to teach in the Greek minority schools in Albania. This was held to be a violation of the Albanian Declaration of Oct. 2, 1921, guaranteeing minorities in Albania the right to maintain and control schools at their own expense. The issue, submitted by the League Council to the World Court for an advisory opinion, was decided on Apr. 6, 1935, when the court ruled against Albania.

ALBERTA, *âl-bûr'ta* A province of Western Canada Area, 255,285 sq. miles; population, 770,000 (1934 estimate) compared with 588,454 (1931 census). Chief cities: Calgary (83,761 inhabitants in 1931), Edmonton, the capital (79,197), Lethbridge (13,489), Medicine Hat (10,300). During 1934 there were 16,163 births, 5322 deaths, and 6053 marriages.

Production. The preliminary estimated value of field crops for 1935 was \$99,562,000 (\$111,381,000 for 1934) of which wheat (105,200,000 bu.) represented \$63,120,000; oats (94,611,000 bu.), \$16,084,000; barley (18,860,000 bu.), \$3,961,000; grain hay, \$8,844,000; hay and clover (465,600 tons), \$2,952,000; potatoes (95,300 tons), \$1,296,000; alfalfa (169,000 tons), \$1,489,000; sugar beets (136,000 tons), \$782,000. In 1934 the province had 1,570,200 cattle, 896,100 swine, 698,300 horses, and 696,200 sheep. Mineral production (1934) was valued at \$20,228,851 including coal (4,753,810 short tons), \$12,556,099; natural gas (14,841,491 M cu. ft.), \$3,707,276; petroleum (1,253,966 barrels), \$3,104,823. Mineral production (1935): coal (5,680,025 short tons) valued at \$14,817,584; natural gas (14,933,300 M cu. ft.). Fur production (1933-34) 2,270,491 pelts valued at \$1,533,799 of which

silver fox (11,993 pelts) represented \$337,003, muskrat (544,808 pelts), \$326,885. During 1933 there were 975 factories, with 10,994 workers, from which the value of products was \$54,642,706 gross and \$25,137,551 net.

Government. For the year ended Mar. 31, 1935, revenue totaled \$15,697,770; expenditure, \$17,435,821; public debt, \$146,048,010; sinking funds, \$9,925,223. Government was vested in a lieutenant-governor aided by an executive council, and a legislative council of 63 members (56 Social Credit, 5 Liberal, and 2 Conservative, elected on Aug. 22, 1935). Alberta was represented in the Dominion Parliament at Ottawa by 6 members in the Senate and 17 members (15 Social Credit, 1 Conservative, and 1 Liberal elected at the general election of Oct. 14, 1935) in the House of Commons. Lieutenant-Governor in 1935, W. L. Walsh; Premier, William Aberhart (Social Credit). See CANADA under *History*.

History. During December, 1936, 16 men were killed by an explosion which occurred in the Lethbridge Collieries Mine at Coalhurst, Alberta.

ALEXANDRIA. See ARCHÆOLOGY.

ALFALFA. The season of 1935 was much more favorable for the production of alfalfa hay than the season of 1934 and this was reflected in a larger acreage and a greater yield. The Department of Agriculture estimated the yield of alfalfa hay at 29,066,000 tons as compared with 19,042,000 tons in 1934 and 23,668,000 tons, the average production for the five years 1928-32. The 1935 acreage of 13,567,000 acres was 2,085,000 acres above the acreage of 1934 and 1,911,000 acres above the five-year average. The average per acre was 2.14 tons while in 1934 it was only 1.59 tons. The leading States reported the following yields: California 2,713,000 tons, Nebraska 2,331,000 tons, Wisconsin 2,111,000 tons, Minnesota 2,093,000 tons, Michigan 1,929,000 tons and Idaho 1,915,000 tons. The highest average yield per acre, 3.8 tons, was reported by California and the largest acreage, 1,260,000 acres, by Nebraska. Alfalfa hay production was reported by all States except Florida.

The alfalfa seed production was practically equal to the average for the five years 1928-32 but was 29 per cent below the record crop of 1930. The 1935 yield was 822,900 bu., as compared with 820,700 bu. produced in 1934. The average yield per acre was 2.29 bu., the average farm price based on preliminary estimates \$8.13 per bushel and the total value of the crop on this basis \$6,694,000. In 1934 the average farm price per bu. was \$10.27 and the total crop value \$8,430,000. Among the 21 States reporting production the leading States and their yields were as follows: Kansas 144,000 bu., Nebraska 104,000 bu., Idaho 93,600 bu., Arizona 88,200 bu., and Utah 59,400 bu.

During the fiscal year ended June 30, 1935, 123,500 lb. of alfalfa seed was imported, practically all from Canada, and 477,000 lb. were exported. The alfalfa meal production for the year ended May 31, 1935, was 186,108 short tons. The duty on alfalfa hay during the year was \$5 a short ton and on alfalfa meal 20 per cent ad valorem. The United States Department of Agriculture continued during the year the development of strains resistant to cold and to bacterial wilt.

ALFALFA INSECTS. See ENTOMOLOGY, ECONOMIC.

ALGERIA. A French colony in North Africa, with an area of 847,870 square miles (of which 625,664 square miles are desert) and a population estimated in 1934 at 6,910,000 (6,553,451 at the

1931 census). The total European population in 1931 was 920,788, including 762,852 French. Populations of the chief towns in 1931 were: Algiers (Alger), the capital, 257,122; Oran, 163,743; Constantine, 104,902; Bône, 68,778. The native population is Moslem, the numerous Jews in the towns being regarded as French citizens. There were 228,482 pupils in primary and secondary schools in 1933 and 2622 students in the university at Algiers.

Production. About 15,172,000 acres are under cultivation while the area of meadows and pasture is 11,522,000 acres. At the end of 1933 livestock numbered 896,000 cattle, 5,262,000 sheep, 2,654,000 goats, 66,000 swine, 168,000 horses, 507,000 mules and asses, and 169,000 camels. Production of the chief crops in 1934 was: Wheat, 43,528,000 bu.; barley, 44,755,000 bu.; oats, 11,889,000 bu.; potatoes, 3,898,000 bu.; wine, 582,306,000 gal.; olive oil (1934-35), 3,980,000 gal.; tobacco, 35,274,000 lb.; dates, 228,753,000 lb. Mineral production in 1934 was (in metric tons): Phosphates, 532,210 (587,753 in 1933); iron ore, 1,327,000 (761,000); coal, 34,000 (30,000); zinc ore, 4000 (5084); petroleum, 560 in 1933; iron pyrites, 16,127 in 1933.

Foreign Trade. Imports in 1934 were valued at 3,973,300,000 francs (4,071,700,000 francs in 1933) and exports at 3,442,500,000 francs (3,817,200,000 francs in 1933). France supplied 82.5 per cent of the 1933 imports and purchased 89.8 per cent of the total exports by value. Algeria in 1934 remained France's most important customer and source of supply, purchasing 17.2 per cent of all French exports and supplying 12.1 per cent of France's imports by value. Cotton fabrics, chemicals, metal manufactures, machinery, iron manufactures, and sugar were the principal imports. The value of the leading 1933 exports was (in 1000 gold dollars): Wine, 93,025; wheat, 10,779; sheep, 3476; spirits, 3298; fruits and nuts (other than dates), 2934; groats, 2322.

Finance. Budget estimates for 1935 placed receipts at 1,872,425,120 francs and expenditures at 1,871,722,943 francs. The public debt on Jan. 1, 1931, was 1,094,000,000 francs. On Oct. 25, 1935, the government issued 600,000,000 francs of 5 per cent bonds, amortizable in 20 years.

Communications. Algeria in 1934 had 3005 miles of railway lines. In 1933 railway receipts totaled 252,040,000 francs. There were 12,220 miles of main highways and 18,217 miles of secondary roads. An air mail service linked Algiers and Marseille. The net tonnage of overseas vessels entering the ports with cargo in 1934 was 8,482,000 (8,241,000 in 1933); tonnage cleared, 8,603,000 (7,792,000 in 1933).

Government. Northern Algeria is divided administratively into the departments of Algiers, Oran, and Constantine, which are considered constituent departments of France and are each represented in the National Assembly at Paris by three deputies and one senator. Administration is centralized in the hands of the Governor-General, with the exception of the non-Moslem services. Southern Algeria is under military government. Governor-General in 1935, M. Jules Carde, appointed Oct. 3, 1930.

History. The political unrest in Algeria, aggravated by adverse economic conditions, fanned a brawl between native soldiers and the police into a serious riot at the town of Setif on Feb. 1, 1935. A number of Jewish shops were looted and the local police station was attacked before loyal troops ended the disorders.

ALLEGHENY COLLEGE. A coeducational institution of higher learning in Meadville, Pa., nonsectarian in policy but under the patronage of the Methodist Episcopal Church; founded in 1815. The enrollment for the autumn of 1935 was 657, and for the summer session 135. The faculty numbered 46 members. The productive funds of the college amounted to \$1,500,000, and the income for the year 1934-35 was \$448,810. The Reis Library contained 107,000 volumes. President, William P. Tolley, Ph.D., D.D., LL.D.

ALLIANCE FRANÇAISE, FÉDÉRATION DE L'. An association of clubs and groups, formed in 1902 for the purpose of encouraging and furthering the study and cultivation of the French language, literature, art, and history in the United States and Canada. By 1935 it comprised more than 290 local branches, including alliances, affiliated societies, and clubs in universities, colleges, and schools.

Each year the Alliance Française brings from France one or more lecturers who are prepared to speak before all the affiliated societies and clubs wishing to hear them. The official lecturer for the season 1934-35 was Marcel Aubert, curator at the Musée du Louvre and professor at the École des Beaux Arts in Paris. The Federation also organizes lecture tours for distinguished French travelers and French lecturers who live in America, assists in organizing courses in the French language and literature in cooperation with the leading universities, and encourages its groups to engage in dramatic performances and debates in French. Its Assemblée Générale, attended by representatives of the various groups, was held in New York City, Apr. 27, 1935. The official periodical is *L'Écho de la Fédération*.

The officers in 1935 were: President, Frank D. Pavey; general vice-president, William Nelson Cromwell; president of the executive committee, Albert Blum; treasurer, John F. Daniell, general secretary, Roger Sherman. Headquarters are at 26 Liberty Street, New York City.

ALSACE-LORRAINE. The provinces transferred to France by the Versailles Treaty (June 28, 1919) to date from the Armistice of Nov. 11, 1918, and now known as the departments of Bas-Rhin (1848 sq. m.; pop., 688,242 in 1931), Haut-Rhin (1354 sq. m.; pop., 516,726), and Moselle (2403 sq. m.; pop., 693,408). Total area, 5606 sq. miles; total population (1931), 1,898,376. The departments were rich in iron, potash, and petroleum.

ALUMINUM. Canadian production of aluminum in 1935 reached 59,958,200 lb., according to the Dominion Bureau of Statistics. This was the highest output since the record production of nearly 73,000,000 lb. in 1929. More than half of the total production, 33,720,400 lb., was consumed in the United Kingdom. Of the remainder, 12,165,600 lb. was exported to Japan, 5,010,100 lb. to the United States, 4,772,800 lb. to Switzerland, and 1,052,700 lb. to Australia.

New aluminum produced in the United States during 1935 amounted to 119,295,000 lb., valued at \$22,070,000, compared with 74,177,000 lb., valued at \$14,094,000, in 1934, according to an advance report issued by the U.S. Bureau of Mines. The principal producing plant was that at Massena, N. Y., where approximately 50 per cent of the metal made in the United States in 1935 was produced.

World production of aluminum in 1935 is estimated at 247,000 metric tons, an increase of about 50 per cent over that of 1934 (170,000 metric tons). The principal producing countries and their pro-

duction, in metric tons, for 1935 and 1934 are: Germany, 62,838 (37,158); United States, 54,112 (33,646); U.S.S.R., 25,000 (14,400); France, 21,847 (16,300); Canada, 20,556 (15,500); Switzerland, 19,432 (8,100); United Kingdom, 16,033 (12,500); Norway, 15,387 (15,500); Italy, 13,085 (12,800).

AMERICAN ASSOCIATIONS AND SOCIETIES. For various scientific and other organizations, whose official titles begin with the word American, see under the important descriptive word of the title.

AMERICAN LAW INSTITUTE. See LAW.

AMERICAN LEGION. An organization of World War veterans, chartered by Congress in 1919. Its purpose, stated in the preamble of its constitution, is "to uphold and defend the Constitution of the United States; to maintain law and order; to foster and perpetuate a 100 per cent Americanism; to preserve the memories and incidents of our association in the Great War; to inculcate a sense of individual obligation to the community, state and nation; to combat the autocracy of both the classes and the masses; to make right the master of might; to promote peace and good will on earth; to safeguard and transmit to posterity the principles of justice, freedom and democracy; to consecrate and sanctify our comradeship by our devotion to mutual helpfulness."

The Legion's seventeenth national convention was held at St. Louis, Mo., September 23-26, 1935. There was an accredited delegate attendance of 1207, representing every State, the District of Columbia, the departments of Alaska, France, Hawaii, Italy, Canada, Panama, Puerto Rico and the Philippine Islands outside the continental limits of the United States, and four outlying posts not attached to a department, Ilavana (Cuba), Guam, Argentina and China Post No. 1.

By a unanimous vote, the convention adopted a clear-cut resolution reaffirming its 1934 Miami, Fla., mandate for the immediate payment of the Adjusted Service Certificates (bonus) at full face value, with cancellation of interest accrued and refund of interest paid, and in unmistakable terms renouncing coupling the payment of these certificates with "questions of finance or theories of currency." The introduction of "currency expansion" into bonus legislation in the First Session of the 74th Congress, over the opposition of the Legion, is credited with having made it possible for the Senate to sustain a presidential veto of the bill, by a vote of 54 to 40, on May 23, 1935.

The resolution adopted by the St. Louis convention set forth:

We request immediate cash payment of the Adjusted Service Certificates at face value, with cancellation of accrued interest on loans, and refund of interest paid, and do hereby reaffirm the Miami Convention resolution on this subject

We request the immediate favorable action of the Congress, and the approval of the President of the United States, upon this clear-cut and single issue, without having it complicated or confused by other issues of Government finance, or theories of currency with which the Legion does not intend to become involved.

We hereby ratify and approve the efforts of National Commander Frank N. Belgrano, Jr. and the National Legislative Committee, on behalf of the Legion's bill at the last session of Congress.

It was the first time in the history of the Legion that a resolution requesting immediate payment of the Adjusted Service Certificates was adopted by unanimous vote.

The convention then adopted, as other major objectives, resolutions urging fulfillment of the

fourth point of the Legion's rehabilitation programme, which provides that in no event shall the widows and/or dependent children of deceased World War veterans be without government protection; enactment into law by Congress of the Universal Service Act, which seeks equal conscription of capital, industry and man-power in the event of war and the use of each in the service of the nation without special privilege or profit; and legislation completing that part of the National Defense Programme not yet enacted into law, with maintenance of gains made last year in raising the regular standing Army to 165,000 enlisted men, starting construction of the Navy up to the full London Treaty strength, and fulfillment of the required reserve components and supplies in all departments.

The above four mandates of the St. Louis convention were adopted by the national executive committee in Indianapolis on Nov. 2, 1935, as constituting the major legislative programme of the American Legion during 1936.

The St. Louis Convention also ordered distribution of a new national newspaper, *The National Legionnaire*, to the entire membership, in addition to the *American Legion Monthly Magazine*.

Cleveland, Ohio, was selected for the Eighteenth National Convention, to be held Sept. 21-24, 1936.

The accomplishments for the year 1935 up to the time of the national convention were reviewed by Frank N. Belgrano, Jr., of San Francisco, the retiring national commander, in his report. The principal items were rehabilitation, child welfare, and Americanism.

Rehabilitation. The National Rehabilitation Committee successfully worked for a broad programme of new government hospital construction with the result that \$30,000,000 were allotted for this new construction and extensions of existing facilities, assuring at least 11,816 additional beds. During the year 16,021 new cases of veterans seeking compensation or hospitalization were referred to the committee, making a total of 136,000 active or potentially active cases now on file. During the fiscal year ending June 30, 1935, the committee, through its efforts, recovered \$1,987,906 in direct individual claims for thousands of veterans whom it represented.

Child Welfare. The activities of the nationwide child welfare programme were expanded during 1935, with splendid cooperation of all the departments, posts and Auxiliary units. An army of 20,000 volunteer workers carried on this work. A known total of \$1,027,734 was expended during the twelve months ending July 31, 1935, in direct financial aid to 256,549 needy children of World War veterans. If all sums expended were reported, the total would exceed this sum by a considerable amount. One half of the income from the Legion's \$5,000,000 endowment fund is set aside for child welfare work, and of this allotment the entire amount was spent in relieving the suffering of children. Administrative expenses were paid by the Legion out of its national dues.

Americanism: Greater emphasis was placed upon the Americanism programme of the Legion during 1935 to combat militantly the increasing spread of Communist propaganda in the United States. The National Americanism Commission carried on with the enthusiastic support of every one of the Legion's 11,225 posts, a vigorous campaign for promoting education, youth activities and community services as the best means of building up a patriotic citizenship. The Legion school award medal programme, designed to implant in the minds of youth at an impressionable age the qualities of real citizenship, reached new heights with 7029 medals awarded during the year, this being 518 more than in 1934.

The membership of the American Legion on Nov. 14, 1935 was 839,622 as compared with 829,205 on Nov. 14, 1934. The national officers elected for 1935-36 were: National Commander, Ray Murphy, Ida Grove, Iowa; Vice Commanders, Raymond F. Gates, Hartford, Conn.; Dr. F. Whitney Godwin, Suffolk, Virginia; Louis R. Probst, Laramie, Wyoming; Dr. W. E. Whitlock, High Springs, Florida, and Oscar W. Worthwine, Boise, Idaho; National Chaplain, the Rev. Fr. Thomas D. Ken-

ned, St. Louis, Mo.; National Historian, Thomas M. Owen, Jr., Washington, D. C.; National Adjutant, Frank E. Samuel, Indianapolis, Ind.; National Treasurer, John Ruddick, Indianapolis, Ind.; and National Judge Advocate, Ralph B. Gregg, Indianapolis, Ind., the latter four being named and confirmed by the National Executive Committee, Nov. 2, 1935. National headquarters were at 777 North Meridian Street, Indianapolis, Ind.

AMERICAN LITERATURE. See LITERATURE, ENGLISH AND AMERICAN.

AMERICAN PSYCHOLOGICAL ASSOCIATION. See PSYCHOLOGY.

AMHERST COLLEGE. An institution for the higher education of men in Amherst, Mass., founded in 1821. For the autumn term of 1935 approximately 841 students were enrolled. The active faculty numbered 73. The productive assets of the college amounted to \$9,500,000, and the income for the year was \$913,000. The library contained 200,000 volumes. President, Stanley King, LL.D.

ANDORRA, ăn-dôr'a. A small republic in the eastern Pyrénées, under the joint suzerainty of the Spanish Bishop of Urgel and the President of France. Area, 191 square miles; population, 5231. The capital, Andorra-la-Vieille, had 700 inhabitants. The Andorrans, who speak the Catalan language, are governed by a council-general of 24 members (12 elected every two years) elected for four years by male citizens of 25 years of age or over. On Sept. 18, 1933, the Council-General elected Pere Torres to be First Syndic (President) and Francisco M. Palanques to be Second Syndic (Vice President). The main occupation was sheep raising.

ANDREADES, ANDREW. A Greek scholar and economist, died at Athens, May 29, 1935. Born in Corfu, Dec. 12, 1876, he attended schools in France and England, where he was trained for educational work. In 1902 he was appointed a lecturer at Athens University, and became professor of economics there four years later. During the World War he served as his country's official censor, and in 1919 was one of the experts at the Paris Peace Conference. At the Danube Conference held in Paris in 1920-21, he served as plenipotentiary, also as a delegate to the League of Nations Assembly in the years 1923, 1924, and 1929.

In 1924, Dr. Andreades returned to his profession and gave a course of lectures at the Academy of International Law at The Hague. Later, he lectured at King's College, London (1926), at four Belgian universities (1927), at Lyons (1931), at Cairo (1932), and at Paris (1933). Also, he served as dean of the faculty of law at the University of Athens, but was compelled to resign through ill health in 1935.

In 1924, Andreades served as chairman of the Committee for Byron's Centenary, and he was president of the Athens branch of the Anglo-Hellenic League. He was a doctor of law and political science at the University of Paris, and a fellow of the Academy of Athens, as well as a member of many international organizations, including the Academy of Political Science, New York, and had been decorated by many governments and held degrees from several universities.

He contributed to various publications, in English and French, many studies on the economic and financial history of Greece; and on the economic problems of modern Greece. In 1919, while on a semi-official visit to the United States, he wrote an article for *The New York Times*, explaining the

grounds for the Grecian expectations at the Paris Peace Conference. He also contributed a volume to the Carnegie Endowment series on the economic problems of the World War, and articles on Greek economics, evidence of his deep knowledge of his subject, to the *Economic Journal*, *Contemporary Review*, and *Nineteenth Century*. One of his publications was a book on the financial history of Ancient Greece, issued in English by the Harvard University Press in 1933.

Other publications were: *Histoire de la Banque d'Angleterre* two vols., translated by Meredith (1904); *Lord Salisbury and Greece* (1904); *The Ionian Islands under the British Protectorate* (1907); *Gladstone as Economist and Financier* (in Greek) (1910); *Gladstone and Greece* (1910); *Sir Charles Dilke and Greece* (1918); *La politique Anglaise en Orient avant et après le traité de Berlin* (1922); *La population Anglaise pendant et après la grande guerre* (1924); *Le théâtre Anglais contemporain*, Brussels (1925); *Philip Snowden* (in French and English) (1930).

ANEMIA. See BIOLOGICAL CHEMISTRY.

ANGLO-EGYPTIAN SUDAN. A British-Egyptian condominium in northeast Africa. Area, 1,008,100 sq. miles; population (latest estimate), 5,728,551 including 51,471 non-natives. Chief towns: Khartoum (capital), 49,741 inhabitants; Omdurman, 110,436; Khartoum North and Rural District, 107,720; Wadi Halfa; Merowé; El Damer; Athbara; Port Sudan, Suakin.

Production. For 1934-35 the estimated production of cotton (ginned) was 45,000 metric tons from approximately 365,560 acres. Gum arabic valued at £E494,957 was exported during 1934. Sesame, groundnuts, senna leaves and pods, dates, mahogany, hides and skins, chillies, dom nuts (vegetable ivory), salt, ivory, gold, and shea seeds were other products. Durra (great millet), the staple food of the natives, and dukhn (bulrush millet) were the main grain crops. Along the banks of the Blue Nile the forests are rich in fibres and tanning materials. Livestock in the Sudan in 1932: 2,250,000 sheep, 2,000,000 goats, 1,250,000 cattle, 400,000 camels, 352,000 asses, 22,750 horses, 1000 mules, and 5000 swine—kept by the Nubas only.

Trade. In 1934, imports totaled £E3,946,796 and included government stores; exports, £E3,848,896 (excluding reexports of £E267,977 and goods in transit of £E133,379) of which cotton accounted for £E2,065,235. The Egyptian pound (£E) of 100 piasters was linked with the pound sterling of 97½ piasters and fluctuated with sterling at a practically constant ratio. Imports consisted mainly of cotton piece goods, machinery, metals and metalware, sugar, tobacco, coffee, tea, sacks, and automobiles.

Communications. On Jan. 1, 1934, there were 2019 miles of railway line (3 ft. 6 in. gauge) open to traffic. A motor transport service was operating from Juba to Aba (Belgian Congo), and to Nimule on the Uganda border. There are many caravan routes including one between El Obeid and Addis Ababa (Ethiopia). Government steamers ply the navigable arms of the Nile and its branches from Aswan (Egypt) to Rejaf.

Government. For 1934 (including receipts and expenditures of Sudan Railways), revenue totaled £E3,774,911; expenditure, £E3,749,488. The Sudan was administered by a governor-general (appointed by Egypt with the assent of Great Britain) aided by a governor-general's council. The Egyptian and British flags were to be used together. Governor-General in 1935, Sir G. S. Symes. See EGYPT and ETHIOPIA under History.

ANGOLA (PORTUGUESE WEST AFRICA). A colony of Portugal in central Africa. Area, 487,788 sq. miles; population (1934), 3,098,281. The chief towns were Nova Lisboa (the capital), Loanda, Benguela, Mossamedes, Lobita, and Malange. There were 73 schools for elementary and secondary education, and 106 professional schools.

Production. Coffee, maize, sugar, palm oil, and palm kernels were the main agricultural products. Cotton, wheat, cacao, tobacco, and sisal were also grown. The production of wax is important. Diamonds form the chief mineral production, and 483,448 carats were exported during 1933. The country also contains deposits of salt, copper, and lignite.

Trade. For 1934 (based on old U. S. A. dollars of 1.50463 grams gold), imports were valued at \$5,200,000; exports totaled \$7,200,000—the main items were diamonds, coffee, maize, and sugar. Trade is mainly with Portugal.

Communications. There were 1425 miles of railway line open to traffic. Highways comprised 17,215 miles of good roads and 20,713 miles of secondary roads. Telegraph lines aggregated 5790 miles; telephone lines, 259 miles. Angola had 19 wireless stations.

Government. The budget for 1934-35 was balanced at £1,374,073. A decree of May 9, 1935, provided that for the future the fiscal year for Angola would be the calendar year. It also approved the budget expenditure of 165,573,193 paper escudos (paper escudo equaled \$0.0449 on June 13, 1935) for the 18 months ending Dec. 31, 1936. The country is under a high commissioner aided by a partly elective consultative council. High Commissioner in 1935, Col. E. F. Viana.

ANHALT. See GERMANY.

ANNAM. See FRENCH INDO-CHINA.

ANNELIDS. See ZOOLOGY.

ANSCHLUSS. See AUSTRIA, CZECHOSLOVAKIA, FRANCE, GERMANY, HUNGARY, ITALY under *History*. LITTLE ENTENTE.

ANTARCTIC EXPLORATION. See POLAR RESEARCH.

ANTHROPOLOGY. This was in no way an exceptional year. The flow of reports on African natives, noted during the last few years, seems to have been checked; similarly with reports from German authors in general. On the other hand, publication has been steadily increasing in the United States to something like pre-depression standards.

No striking finds of prehistoric man were reported. The year's most important contributions in this respect were evidences of early man in North America. Much may be expected in the near future from the increased activity of archaeological efforts in the Soviet Union.

Theoretical discussions of any significance have been rare. R. Thurnwald's discussion of primitive law (*Werden, Wandel und Gestaltung des Rechts im Lichte der Völkerforschung*, Berlin) was premised on the view that law is no mere mechanism of procedure, but a dynamic thing integrated with all phases of social and religious life. A terminal volume of W. Schmidt's *Der Ursprung der Gottesidee* (Pt. 2, vol. vi, Münster) was a synthesis of primitive religion in America, Asia, Australia, and Africa from the culture-historical point of view (*Kulturkreislehre*).

Ethnography. An excellent survey of the *Present State and Future Development of Ethnographical Research in South Africa* by I. Schapera (*Bantu Studies*, 8:219, Johannesburg) augurs well for coordination of effort by students there. At-

tention was called to the principal deficiencies in ethnographic surveying of Bantu, Bergdama, Hotentot, and Bushman peoples, the voluminous but fragmentary literature assessed, and plans laid for coordinated research.

An attempt to define the *Culture Areas of Nigeria* by W. D. Hambly (*Field Mus. Nat. Hist. Publ.*, 31, No. 3) was not wholly successful, primarily by reason of the very real intricacy of cultural relationships in this west African area. It does seem possible, however, to show a correspondence between geographic zones and cultures. In the dense coastal forest is true Negro culture; northward of 8°N. this is overlaid by elements of Mohammedan and Mediterranean derivation; between 10° and 14°N., i.e., to the Sahara desert fringe, is a culture belt characterized by the use of horses, camels, and oxen, ox culture prevailing in the south, camel nomadism in the north.

An ethnographic account from n.e. Angola (H. Baumann, *Lunda*, Berlin) relates especially to the Vachokue. According to this author, Angola forms part of a cultural province which includes the southern Congo, the Zambesi peoples, and Southern Rhodesia.

A suggestive discussion of *Indonesian Influence on East African Culture* (*Jour. Royal Anth. Inst.*, 64:305) by J. Hornell notes (1) that voyaging from Sumatra and Java to Madagascar may have been by stages via southern India and Arabia (7th century A.D.?), later direct to Madagascar (10th century); (2) that Malagasy (Malay) may have preceded the negro element in the island, the latter being escaped slaves; (3) elements of material culture, notably the outrigger-boats (and probably features of the Zimbabwe ruins, Rhodesia), are distributed along the e. African coast in negro cultures.

Two accounts from Melanesia concern Manus in the Admiralty Islands and the Solomon Island natives. *Manus Religion* (*Mém. Amer. Phil. Soc.*, 3) was described by R. F. Fortune as revolving in part about the special relation between each man and his father's ghost, which gives moral sanctions, aid, and protection. Illness results from sin; confession is its normal cure. The result is a puritanical moral code. The ancestral ghost, expected to assure long life and protection from other ghosts, is cast out if it fails in its duty. An extended description of the natives of n. Bougainville and adjacent Buka, n.w. Solomon Is., by B. Blackwood (*Both Sides of Buka Passage*, Oxford) relates primarily to social, sexual, and economic matters. The social unit within the village is the immediate kin group, beyond which linkage is closer with a man's matrilineal lineage (clan) than with his father's lineage. Nevertheless, personal property is inherited indifferently by a man's son or his sister's son. Certain lineages take precedence over the rest, their heads being in effect chiefs. Inasmuch as it has been frequently stated of natives to the west and in Australia that they had no knowledge of physiological paternity, it is noteworthy that here a belief in the possibility of impregnation without intercourse exists along with full understanding of the sexual act.

Special reports on the archaeology of Polynesia continued to appear. Among these K. P. Emory's *Archaeology of the Pacific Equatorial Islands* (*Bull. Bishop Mus.*, 123), relating to the Phoenix group and adjacent islands, supports the conclusion that a close cultural bond existed between Malden Is. and Raivavae, Austral Is., and on the other

hand suggests influences from Tonga in Fanning Island.

A discussion of *Archaeological Problems in Australia* (*Jour. Royal Anth. Inst.*, 65:145) by D. S. Davidson may prove fertilizing in a neglected field. To be sure, thanks to a poor material culture and the nomadic habits of the natives, excavations may not prove rewarding, but at least one deep stratified site has been exploited in South Australia and now several caves are reported from the northern area.

A significant contribution to the problem of man's antiquity in America appeared in the report on *A Folsom Complex* (*Smithson. Misc. Coll.*, 94, No. 4) by F. H. H. Roberts, Jr. While the discovery of stone blades bearing peculiar fluting with fossil bison, musk ox, mammoth, and other extinct animals at Folsom, New Mexico, and elsewhere during the last decade has been taken as evidence of man's presence during the terminal Pleistocene, there has been no evidence available of the content of the culture. Roberts' report on a site occupied by makers of these blades (Ft. Collins, Colo.) indicated a stone-working culture of only modest range, with two types of Folsom blades.

Alaska has been looked to hopefully for evidences of the same nature on the assumption, generally held, that *Early Migration of Man to America* (*Natural History*, 35:356) took place via Behring Straits. Recent finds there, in the opinion of N. C. Nelson, coincide with finds in the Gobi desert, central Asia. "The specimens furnish the first clear archaeological evidence we have of early migration to the American Continent, apparently during the final or Azilian-Tardenoisian stage of the Palaeolithic culture horizon, possibly 7,000-10,000 B.C."

A general summary of the *Evidence of Early Man in North America* (*Museum Journal*, 24:61), provided by E. B. Howard, consolidated all archaeological, paleontological, and geological findings to date. It was held that (1) there is no longer doubt of the association of artifacts with animal forms now extinct; (2) these artifacts are invariably Folsom or the similar Yuma stone blades; (3) the gap between these finds and the earliest proto-historic Indian culture (Basket Maker) may yet be bridged by other finds.

For years it has been assumed that the great Plains area was devoid of archaeological interest, that it was relatively barren, and that at best remains there would be found to be only superficial. But a series of investigations in the heart of the area by W. D. Strong serve not only as *An Introduction to Nebraska Archeology* (*Smithson. Misc. Coll.*, 93, No. 10) but as suggestive of what may be revealed throughout the Plains. Stratified deposits show that historic Indian cultures were antedated by a relatively rich "Nebraska" culture, itself arising from the considerably earlier Stern Creek stage. The "Nebraska" culture (with agriculture and rectangular earth lodges) shows definite affiliations to the south and east. Contemporaneous with these were two local cultures (Signal Butte III, Dismal River) to the west. While these finds offer antecedents for the historic cultures, a far more ancient series was revealed on the higher plains. Here Signal Butte I, the earlier, bore stone blades of the Folsom type. There is a possibility that these results will be duplicated elsewhere in the Plains, but it is to be noted that Strong does not now repeat the exaggerated claims for the universality of an agricultural complex in

prehistoric times made in an earlier paper (*Amer. Anth.*, 35:271, 1933).

An assessment of the archaeology of the most fully exploited primitive area in the world, southwestern United States, was provided by F. H. H. Roberts, Jr.'s *Survey of Southwestern Archaeology* (*Amer. Anth.*, 37:1). While the views propounded were not new, the clarification of the involved situation may serve as a new point of departure.

The general condition of the Valley of Mexico in pre-Columbian times as now revealed by archaeology seems to have been an infiltration of successive tribes with differing cultures, not an unbroken cultural development (E. Noguera, *Antecedentes y Relaciones de la Cultura Teotihuacana*, Mexico, D. F.). Of special importance in this respect is the report on *Tenayuca* (Mexico, D. F.), the product of the Mexican government staff, a full record of the culture and history of the Aztec and Chichimec populations in the Valley of Mexico. Tenayuca was the seat of the Chichimec rulers, later an important fief of the dominion of the Tepanecs, and was finally in the hands of the Aztecs until after the Conquest. Stratified deposits corroborate the historical sequence.

Several full-length ethnographic accounts were published. F. G. Speck's *Naskapi* (Norman, Okla.) deals almost wholly with religious life and ideas of a people of interior Labrador. R. H. Lowie's account of *The Crow Indians* (New York) makes generally available the data on one of the most fully described tribes of the New World. *Wintu Ethnography* is represented as amorphous by C. Du Bois (*Univ. Calif. Publ. Amer. Arch. Ethn.*, 36, No. 1). Bennett and Zingg's *The Tarahumara* (Chicago) was not only the fullest record for a north Mexican tribe yet published, but made a new estimate of cultural relations throughout the general area.

A discussion of suggested connections between the Eskimo language and Indo-European tongues was given by C. C. Uhlenbeck (*Mededeelingen Konink. Acad. Wetenschappen*, Afd. Letterkunde 77, A. No. 6, Amsterdam). Another discussion, *Phonetic Shifts in Algonquian Languages* (*Int. Jour. Amer. Ling.*, 8:131) by T. Michelson may serve to establish the historical relations of these mid-North American groups.

A methodological caution attaches to L. Spier's *The Prophet Dance of the Northwest* (*General Series in Anth.*, 1). The Ghost Dance of the Plains Indians, a messianic movement that had its inception among the Paviotso of western Nevada and swept like wildfire through the Plains in 1890, has long served as a classic example for the direct interpretation of cultural developments in psychological terms. It has been assumed that the preachment of a world freed of white domination through supernatural agencies, with the return of the dead—an end hastened by frenzied dancing in a prescribed form—was the spontaneous expression of despair at the encroachments of the whites. But not only had Kroeber shown that a precisely identical movement spread from the Paviotso through California some 20 years earlier, but now Spier has demonstrated that the origin of the complex lay in the Prophet Dance of the northwestern tribes situated between the Rockies and the Coast Range. Demonstrably as far back as 1790, a series of prophets or messiahs appeared in this region who preached the same doctrine and made use of an almost identical dance pattern with that of the Plains, far in advance of any encroachment or even knowledge of the whites. While it can be

maintained that the disruption of tribal life in the Plains in 1890 served as cause for adherence to the messianic movement, it is clear that both Plains doctrine and dance are explicable as the result of indirect historic contacts with the Northwest, not as devices developed on the spot in response to psychic needs.

There continues to be very little serious literature on South America. Evidences of types of social structure more complicated than the simple family organization, heretofore believed universal in South America, establish *Mandurucú Moieties* in the southern Amazon area (A. Kruse, *Primitive Man*, 8, No. 4). An extended account of the life and culture of the Jibaro of eastern Ecuador and Peru (*The Head-Hunters of Western Amazonas*, Soc. Scien. Fennica, 8, No. 1, Helsingfors) was a rarity among ethnographic reports from the continent in its great detail.

Using South American cultures as the point of departure, W. Krickeberg (*Zeitschrift f. Ethnol.*, 66:287) returned to the problem of ancient cultural connections between northern North America and southern South America, to which Nordenskiöld and others gave attention in earlier years. This author extends the list of parallels previously reported in the cultures of these two areas, which are separated by the higher cultures of the cordilleran region of Middle America. A critical examination convinced him that the common elements derive from a sub-arctic, or at least northern, culture in North America (and ultimately connected with the sub-arctic culture of Eurasia) which in ancient times flowed as far as Tierra del Fuego, and subsequently was overlain by the higher cultural developments of Middle America.

Since the archaeology of coastal Venezuela and Colombia has been little explored, data from *New Archaeological Sites in the State of Falcón, Venezuela* (*Ibero-Americana*, 11) by G. A. Nomland may prove a point of departure. The ceramic remains are generically like those of the Antilles, Panama, and southern Central America.

Prehistory and Physical Anthropology. Unusual activity in archaeology was reported in the U.S.S.R., where a large number of expeditions were dispatched by the Academy of Sciences and State Academy for the History of Material Culture (Leningrad) and the All-Ukrainian Academy (Kiev). Most Ukrainian sites date from Aurignacian times, but remains of other Upper Paleolithic, Mesolithic, and Neolithic strata were also found. Neolithic stations were discovered in the Baltic-White Sea area (*Sovetskaya Ethnografiya*, Leningrad, 1935:160). Bronze Age sites on the Volga and Don. In Trans-Caucasia, Zamiatnin distinguished three Upper Paleolithic levels, but notes the transitions from one to another, a characteristic setting them apart from the sharply differentiated Paleolithic cultures of western Europe but aligning with the Capsian and Natufian cultures of the Mediterranean. In the Crimea, Tardenoisian and Azilian (Mesolithic) finds were made. Excavations in Turkistan revealed remains of later date. Excavations of Neolithic graves on the Amur River (e. Siberia), under W. Bogoras, were directed toward the problem of early migrations into the New World.

A brief survey of current views of the development of man and the anthropoids from pre-primate forms, definitely useful to the non-specialist, was contributed by E. A. Hooton (*Homo Sapiens*, *Science*, July 12:19). The view that man diverged from the anthropoid line after the gibbon and

orang-utan, but before the gorilla and chimpanzee—and was not derived from an early tarsoid or lemuroid type—seems to be sustained by majority opinion. That ancestral *homo sapiens* appeared in early Pleistocene times and paralleled in development the Neanderthal and other fossil humans, rather than being directly related to them, was also held probable.

Fuller reports on the human remains of reputed great antiquity in East Africa by L. S. B. Leakey (*Stone Age Races of Kenya*, London) now permit more adequate scrutiny of the evidence. E. A. Hooton and A. Smith Woodward, e.g., express grave doubts of the Middle and Lower Pleistocene age of the remains, and hence scout the significance of these modern racial types of supposedly high antiquity (*Amer. Anth.*, 37:681; *Science*, 82:401).

To account for the present distribution of races, there must be assumed several almost world-wide migrations at an early date of three races—Australoid, primitive Negroid, and an infantile type of Negroid—in the tentative view of L. H. Dudley-Buxton (*Anthropos*, 30:343). It is wholly uncertain what the order of migration may have been or even that there were two distinct Negroid types.

It has been thought that the most fundamental racial relationships might be found, not in superficial anatomical characters, but in certain blood groupings which rest on basic physiological relationships. It has long been known that blood contains a limited number of substances or "factors" (four, five, or more) which combine variously in each individual, the combinations being heritable. Racial groups showing the same proportions of individuals with identical combinations have been presumed to be genetically related. But the world distribution of the blood groups offers very real difficulties to such a simple interpretation. Wyman and Boyd, in the most comprehensive paper yet published (*Amer. Anth.*, 37:181), suggest that the blood factors are of high antiquity, since they are identical with those of the apes, were carried throughout the world in the early dispersion of the basic races of mankind; and that the present races differentiated only subsequently. The alternative is to assume a series of mutations of the blood factors to account for their sporadic distribution, but the chances of such mutations are held to be very slight.

A comprehensive presentation of *Racial Affinities of the Peoples of India* (*Census of India*, 1, 3A, Delhi) by B. S. Guha is clearly the most significant contribution from that area since Risley's work in the Census of 1901. According to Guha's analysis of the anthropometric data, seven components are discernible in the present population. (1) As a basic substratum, a short-statured long-headed element with high cranial vault. Superimposed on this is (2) in the western littoral and Bengal a brachycephalic element of medium stature with flattened occiput, also high-headed. (3) In northern India, another long-headed strain with comparatively lower but longer head, tall stature, long face, prominent nose. In addition, in the aboriginal population is (4) a short group with long and moderately high head, strongly marked brow ridges, broad short face, small flat nose, predominant in central and southern India, and allied to the Veddas, Toalas, Sakai, and the aborigines of Australia. At an early time, this type displaced and intermixed with (5) a dark pygmy strain having spirally curled hair, remnants of which are found in the Perambicullian Hills (Madras). The true Mongoloid strain does not appear to have

entered India, but (6) a related brachycephalic type is dominant in the sub-Himalayan region from n.e. Kashmir to Bhutan, and (7) a second type, with medium stature and longish head, in Assam and n. Burma. Some suggestions were made by Guha of the succession and direction of movement of these racial elements, but the available prehistoric evidences are too few to give certainty to his formulation.

Expeditions and Activities. The Statens Etnografiska Museum (Stockholm) was separated this year from the Naturhistoriska Riksmuseet, yet remaining under the Royal Swedish Academy of Sciences. S. Linné and G. Montell carried on archaeological researches at Pico de Orizaba, Teotihuacan, and Calpulalpan in Mexico, also making ethnographic inquiries among Aztec, Otomi, Tepehuane, and Totonac peoples. G. Bolinder pursued ethnographic work among the little-known tribes of the tributaries of the Orinoco (s.e. Colombia) and archaeology near Bogotá. Collections were made by R. Malaise in n. Burma and Yunnan, S. Bergman in Korea, O. Janse in Indo-China, and R. Andersen-Barnholdt in Tahiti. For the Anthropologische Gesellschaft in Vienna, J. Wastl was occupied with the ethnography of northwest Papua (New Guinea). The Staatliches Museum für Völkerkunde in Berlin was unable to put expeditions in the field. This seems to have been the general circumstance of other Continental organizations.

For the Museo Nazionale di Antropologia e Etnologia (Florence), L. Cipriani made an anthropometric reconnaissance in southwest Asia, from southern India and Ceylon (Coorg, Cochin, and Travancore peoples) to Syria and Turkey. In Italian Somaliland, N. Puccioni investigated the Baguni and other tribes in the south, P. Graziosi the prehistoric remains near Bur Hacaba in the north.

There is reported from Peru the formation of a governmental division for the study of Indian communities and the assignment of supervision of antiquities to a Patronato Nacional de Arqueología for the Instituto de Antropología (Lima). T. M. Xesspe collected pottery at Chavin and explored between Huacho and Chancay and on the Marañón and the Pukara.

The National Museum of Canada (Ottawa) supported archaeological research by W. J. Wintemberg in Ontario and by D. Leechman of Eskimo remains at Port Burwell (Labrador). D. Jenness was engaged on the ethnography of the Coast Salish (Brit. Col.).

Ethnographic researches of the Bishop Museum (Honolulu) in Polynesia took P. H. Buck to Mangareva, K. P. Emory to the Tuamotos, E. Beaglehole to Pukapuka, C. S. Ford to Fiji, and E. S. C. Handy to Hawaii. Work in Micronesia included similar studies in Palau, Ponape, Kusaie, and Truk Islands.

In Washington the activities of the Bureau of American Ethnology were primarily archaeological and linguistic. In the first category was M. Stirling's inspection of sites in Guatemala, Honduras, Yucatan, and Florida, and F. H. H. Roberts, Jr.'s excavation of a Folsom culture site near Fort Collins (Colo.); linguistic investigations were made among Algonkin and Eskimo tribes east of Hudson Bay by T. Michelson and on Timucua (Florida) sources by J. R. Swanton. The staff of the United States National Museum had work by A. Hrdlička on Kodiak Is. (Alaska), H. W. Krieger at the Bonneville dam, Columbia River,

and F. M. Setzler in Kentucky and Georgia. At the Catholic University of America, R. Flannery continued field work among Cree and Montagnais (James Bay, n. Canada) and C. J. Connelly studies of primate brain morphology. Studies of growth were made for the Carnegie Institution by M. Steggerda in Yucatan and Guatemala, and S. D. Aberle among the Pueblos (New Mexico-Arizona), with several archaeological investigations at Copan (Honduras) and in the Guatemalan highlands.

Eight ethnologists visited Indian reservations for studies of their present status in relation to aboriginal cultures (under W. D. Strong) for the Bureau of Indian Affairs.

Studies in Middle America were undertaken for the University of Pennsylvania Museum: on the archaeology of Piedras Negras (Guatemala) by L. Satterthwaite and on Maya (Yucatan) ceramics by M. Butler. A general survey of the Guajira area (Venezuela-Colombia) was made by V. Petrullo and others. An archaeological survey of the lower Yukon River (Alaska) was directed by F. de Laguna.

Columbia University sponsored a large number of field trips: R. Fortune near Mt. Hagen (New Guinea), B. Quain on Vanua Levu (Fiji), B. Aginsky—Pomo (Calif.), M. Smith—Puyallup (Wash.); on several Plains tribes—R. Landes, Santee; W. Whitman, Ponca; J. Mirsky, Comanche; G. Welffish, Pawnee; M. Champion, Fox; A. Hoebel, Shoshoni; on two Southwestern tribes—E. Kennard, Hopi; R. Underhill, Mohave; and by J. Lips, Naskapi (Labrador); I. Goldman, Carrier (Brit. Col.).

Field projects of the American Museum of Natural History included archaeological work in the Valley of Mexico by G. C. Vaillant, in the archipelago of southern Chile by J. Bird, and Puerto Rico by F. Raney; ethnological work of Cree, Kutenai, Flathead, and Piegan (Montana-Canada) by C. Wissler, D. C. Mandelbaum, and C. E. Schaeffer. Excavations for the Museum of the American Indian (New York) were made in Vermont, in New York City, and the Virgin Islands by L. J. Korn. An ethnological trip to northeast Ecuador was undertaken by E. E. Loch.

Harvard University continued its archaeological investigations in Ireland, dispatched J. P. Gillin to the Quechua (Ecuador), G. Schwab to the Basa (Cameroon, w. Africa), J. M. Andrews to Siam, G. T. Bowles for racial investigations on the Tibeto-Indian border, and J. O. Brew for archaeology of Awatobi (Arizona). Yale University sent W. Z. Park to Paviotso (Nevada), G. P. Murdock to Tenino, and L. Spier to Klamath (Ore) for ethnology. For the Laboratory of Anthropology (Santa Fé), A. Lesser headed a party for investigating Kiowa (Okla.) ethnology; and for Tulane University, F. Blom made a reconnaissance of ruins in Honduras, S. M. Leche a biometric study of Indians in Chiapas (Mexico), while G. Kramer made an architectural study in Guatemala.

The archaeology of the upper Mississippi valley again engaged the attention of the University of Chicago: ethnological investigations were also made by G. McAllister among Kiowa-Apache (Okla.), M. Opler and E. Rosenfelds among various Apache groups (New Mexico), R. Zingg of Huichol (n. Mexico), and F. Eggan among Tinguian (Philippines). For the University of Michigan, investigations were made in ethnobotany (M. R. Gilmore), in ceramics (J. B. Griffin), and in Michigan archaeology (E. F. Greenman). For

Northwestern University, J. C. Trevor made a general ethnographic study on St. John, Virgin Is. W. C. McKern excavated mounds in n. w. Wisconsin for the University of Wisconsin.

The University of California sent three men to British Columbia for ethnological work: R. L. Olson to the Heiltsuk and Haisla, P. Drucker to Nootka, H. Barnett to Coast Salish; continued C. Nimuendajú's studies of the Ges tribes of eastern Brazil, and had a group investigating the distribution of culture traits in California and the Southwest. The Southwest Museum (Los Angeles) reported archaeological work in the Moapa valley (Nevada) by M. R. Harrington, in Yokuts territory (Calif.) by E. F. Walker, and in the southern California desert by W. H. Campbell; F. Densmore studied Cheyenne and Arapaho (Okla.) music. The University of Washington reported ethnographic work by V. Ray among the Interior Salish, E. Gunther among Makah, and M. Jacobs among Sahaptins, all in Washington.

ANTIGUA. See **LEEWARD ISLANDS, BRITISH.**

ANTIOCH COLLEGE. A nonsectarian co-educational institution in Yellow Springs, O., founded in 1853 and reorganized in 1920. The number of students enrolled for the autumn term of 1935 was 660, of which 434 were men and 226 were women. The faculty numbered 91. The productive funds of the institution amounted to \$269,307, and the operating income for the year was \$412,503. The library contained 46,645 volumes. President, Arthur E. Morgan, D. Sc. During 1935, Dr. Morgan also served as chairman of the board of directors of the Tennessee Valley Authority.

ANTI-SALOON LEAGUE OF AMERICA. A federation of churches and temperance organizations in the United States whose object is the extermination of the beverage liquor traffic. It was established in 1895 by a coalition of the Anti-Saloon Leagues of four states and the District of Columbia. At the end of 1935 it embraced 40 state or territorial leagues and affiliation with 45 other national temperance organizations, as well as with the World League Against Alcoholism. (q.v.)

During 1935 the organization's principal efforts have been directed toward combating the efforts to extend the legalized liquor traffic, and in waging campaigns in the following states to prevent repeal of prohibition amendments in the state constitutions or statutory laws for the prohibition of the liquor traffic: Alabama, Georgia, Texas, and Kentucky. The organization has worked for the inclusion of the right of local option with respect to the sale of liquor in liquor control acts or license laws, and to carry territory dry under such local option laws where in force.

In view of the conditions brought about by repeal of the Eighteenth Amendment, which permit the wide-spread sale of intoxicating liquors, special emphasis has been laid upon education regarding the nature of alcoholic beverages. The League has also urged enactment of legislation to prohibit or restrict advertising which has as its purpose the stimulation of sale and consumption of alcoholic liquors. Temperance dramas, debates, and lectures have been sponsored. Statistical and factual matter, relating to the social and economic phases of the alcohol question, has been issued from the national office and by the American Issue Pub. Co., located at Westerville, Ohio.

The officers of the League in 1935 were: President, Bishop E. G. Richardson, Philadelphia, Pa., general superintendent, F. Scott McBride, Washington, D. C.; director of the department of educa-

tion, Ernest H. Cherrington, Westerville, Ohio; secretary, Andrew Wilson, Washington, D. C.; national attorney, Edward B. Dunford.

ANTI-SEMITISM. See **JEWIS.**

APPROPRIATIONS. See **UNITED STATES** under **Congress.**

AQUEDUCTS. The greatest aqueduct construction now under way, in fact the greatest ever attempted by man, is the 220-mile Colorado River line which will carry water from the Colorado to the Metropolitan District of Southern California. This work has been described in previous **YEAR BOOKS.** Its most interesting feature is the huge tunneling operation involved (tunnels aggregating 92 miles in length), and interest during the past year has centered in the tunneling methods employed and the progress made in driving these bores. Some 13 contracting firms, plus the force-account works of the District itself, have invested no less than ten million dollars in plants and equipment for this work. This reflects in an interesting way the trend in modern construction. That is, in order to save interest by reducing the period of construction to a minimum and to replace costly hand labor by modern machinery, it is economical to spend millions on plant and equipment, only part of which expense will be returned through salvage at the close of the work.

Tunneling operations on this work have been carried on simultaneously from some 58 headings, 19 of which are reached from 10 adits, 12 from vertical shafts, and 27 directly from the portals. In some cases, particularly the San Jacinto and Valverde bores, heavy flows of water have been encountered. The rock varies from solid material requiring little or no support to sections demanding heavy timbering to carry the tremendous pressures. Gunite is being used where necessary to prevent air slacking of the exposed rock and spalling of the surface.

The rate of progress has been on an average, about 6 ft. per shift or 18 ft. per day. In one case (Seven Palms Tunnel) 54 ft. of full unsupported section was driven in one day and the monthly record (Copper Basin No. 2 Tunnel) has been 1084 ft.

Tremendous as this undertaking has been, as the year comes to a close, the actual driving of these tunnels is nearing completion and the problem of lining will go ahead in 1936.

In the East, the new Boston water supply work is rapidly nearing completion. The remarkable pneumatic-caisson cut-off of the Quabbin Reservoir, completed in 1934, has been followed by the placing of the hydraulic fill dam. The 24.6-mile Wachusett-Quabbin Aqueduct is practically complete and ready for service.

In New York, the proposed new Western Catskill Mountain Supply is still hanging fire, although the new distribution tunnel, No. 2, was completed and formally opened at the end of the year. Hartford, Conn., is again extending its 83-year-old system through developments on the East Branch of the Farmington River. A programme of progressive construction of the necessary works is under way. In the West, Denver, Colo., has continued the work to secure a supply from the western slopes of the Continental Divide by utilizing the pioneer bore of the Moffat Tunnel (see 1934 **YEAR BOOK**).

ARABIA. The great peninsula of southwestern Asia. Area, 1,200,000 sq. miles; population (estimated), 10,000,000. The divisions of Arabia are given below. See **ADEN.**

Bahrain Islands. An archipelago in the Persian Gulf near the Arabian coast of Hasa. The main islands were Bahrain, Muharrak, Sitra, Nebi Saleh. Total area, 213 sq. miles; population, 120,000. Chief towns: Manama (capital), 25,000 inhabitants; Muharrak, 20,000. Date cultivation, boat building, pearl fishing, and the breeding of white donkeys were the chief industries. For 1933-34, total imports were valued at Rs9,275,050; total exports, Rs6,754,800 (rupee averaged \$0.3788 paper for 1934). The islands were under the protection of Great Britain. Ruling Sheik in 1935, Hamad bin Isa al Khalifa.

Hadramaut. A region east of Aden, under loose British protection. The principal products were dates, indigo, tobacco, and livestock. The Qa'ati dynasty (represented by the Sultan of Makalla) ruled most of the territory but some of the inland towns and villages were governed by the Kathiri dynasty.

Kuwait. The state along the northwestern coast of the Persian Gulf. Area, 1930 sq. miles; population, 50,000. Capital and chief port, Kuwait. For 1933-34, imports totaled £258,857; exports, £94,516—the main items were pearls, horses, and wool. Kuwait was in treaty relations with Great Britain (represented by a political agent). Ruling Sheik in 1935, Sir Ahmed bin Jabir al Subah.

Oman. The southeasterly corner of Arabia. Gwadar, a port on the Persian side of the Gulf of Oman, belongs to Oman. Total area, 82,000 sq. miles; population, 500,000 (mainly Arabs but there was an infiltration of Negro blood near the coast). The chief towns were Muscat (capital) with 4500 inhabitants, and Matrah with 8500. The chief products were dates, limes, pomegranates, and dried fish. For 1932-33, imports amounted to Rs3,471,618; exports, Rs2,027,334 (rupee averaged \$0.3788 paper for 1934). Reigning Sultan in 1935, Sayid Said bin Taimur.

Oman, TRUCIAL. The six Arab states north of Oman, formerly known as the Pirate Coast. Area, 6000 sq. miles; population, 80,000 including 8000 nomads. Chief capital, Abu Dhabi (6000 inhabitants). The export of pearls to India was the chief trade of the coast ports. Each state is ruled by a sheik under treaty relations with Great Britain. The British Political Resident at Bushire in the Persian Gulf was the acknowledged adviser and arbiter for Trucial Oman.

Qatar. The Qatar peninsula to the north of Trucial Oman. Area, 8000 sq. miles; population, 26,000. Capital, El Beda. The country was ruled by Sheik Abdullah Ibn Jasim under treaty (Nov. 3, 1916) with Great Britain.

Saudi (sā-ōō'dē) Arabia, KINGDOM OF. The territory formerly known as the Kingdom of Hejaz and Nejd and its Dependencies. Ruler in 1935, King Abul Aziz Ibn Saud.

Nejd extended over some 800,000 sq. miles of central Arabia and included the Nafud and Dahna deserts. Population, 3,000,000 (estimated). Chief towns: Riyadh (capital), 30,000 inhabitants; Hufuf, 30,000; Mubarrak, 20,000; Shagra; Anaiza; Buraida; Hail; Jauf; Sakaka; and Hauta. Wheat, barley, dates, fruits, wool, hides, butter, Arab cloaks, and livestock were the principal products. Nejd was governed in patriarchal manner by the King. His eldest son (Emir Saud) acted as Viceroy at Riyadh where he normally resides.

Hejaz extended along the west coast from Trans-Jordan to Asir. Area, 150,000 sq. miles; population, 1,500,000 (estimated). Chief towns: Mecca, the capital and holy city of Islam, 130,000 inhabitants; Jidda, the seaport for Mecca, 40,000; Medina, the

site of Mohammed's tomb, 30,000; Yenbo (Yanbu), the seaport for Medina. Dates, honey, butter, fruit, hides, and wool were the main products. The principal income of the country was derived from the annual pilgrimage of Moslems from abroad. Hejaz was governed by a council of ministers under the presidency of the King's second son, Emir Faisal, who acted as Viceroy during the King's absence.

Asir, a province between Hejaz and Yemen, was ruled as an independent state by the Idrisi dynasty until 1926 when it accepted the suzerainty of Ibn Saud. In 1933, because of the Idrisi uprising, it was incorporated in Ibn Saud's dominions. Area, 14,000 sq. miles; population, 1,000,000. Sabiya, the capital, had 20,000 people.

Yemen. An independent state between Saudi Arabia and the Aden protectorate. Area, 75,000 sq. miles, population, 3,500,000. Chief towns: Sana (capital), 25,000 inhabitants; Hodeida (chief port), 40,000. The main products were wheat, barley, millet, coffee, and hides. King in 1935, Yahya Hamid ed-Din.

History. The movement for unification of the Arab states freed from Turkish rule during the World War gained momentum during 1935, with King Abdul Aziz Ibn Saud of Saudi Arabia as the directing influence. Ibn Saud's policy of conciliation of Arab differences was revealed in the peace treaty signed with the Imam Yahya of Yemen at Taif on June 23, 1934, after the Yemenite forces had been defeated in a short war (see 1934 YEAR BOOK, p. 39). The treaty was described as one "of Moslem friendship and Arab brotherhood." But on Mar 15, 1935, three Yemenite conspirators with drawn daggers attacked Ibn Saud and his eldest son, Emir Saud, as they were performing the religious rite of walking seven times around the sacred Kaaba at Mecca. The conspirators were held off by the Emir Saud and immediately shot to death by the Royal guard. They proved to be Zeidis, members of the dominant Moslem sect in Yemen, which was violently antagonistic to the Wahabi sect headed by Ibn Saud. It was uncertain whether the attempted assassination was inspired by religious or political motives, but the circumstances of the attack aroused great indignation throughout the Arab world and increased the prestige of the Saudi Arabian ruler.

The Italian preparations for invasion of Ethiopia (q.v.) provided a new incentive to Arab unity. At the invitation of Emir Abdullah of Trans-Jordan, the Emir Saud of Saudi Arabia and Arab leaders from Syria and Palestine met in Amman, the capital of Trans-Jordan, during Aug. 16-19, 1935, to consider Arab and Moslem interests in the impending conflict. They saw an eventual threat to their own safety in Italy's determination to expand in the Red Sea region. On October 3 it was reported from Jerusalem that King Ibn Saud had called a Pan-Arab conference to discuss further plans for Arab action with respect to the Italo-Ethiopian dispute. In line with this development was the report published in Cairo on December 2 that Saudi Arabia and Iraq had signed a defensive alliance and agreed to coordinate their currencies, school systems, and armaments, to establish joint diplomatic representation in foreign countries, and to abolish passport restrictions. Earlier in the year the two governments had reached an agreement for the opening of a bus route from Nejef, Iraq, on the Euphrates, to Medina and thence to Mecca, to facilitate the pilgrimages of Iraq Moslems to Mecca. The restoration of the Hejaz Railway, wrecked by Col. T. E. Lawrence and his Arab allies during the

World War, was the subject of negotiations between the British, French, and Saudi Arabian governments, according to an official communiqué issued at Mecca on September 28.

A future source of dispute between Ibn Saud and the British was provided by an agreement making Great Britain responsible for the defense of Akaba which was concluded by the chief of the British General Staff and Emir Abdullah of Trans-Jordan in April. Situated at the head of the Gulf of Akaba and at the junction of Egypt, Palestine, Trans-Jordan, and Saudi Arabia, Akaba was regarded as of the greatest strategic importance. Ibn Saud had repeatedly pressed his claim to it. The British were reported to be rapidly transforming Akaba into a strong naval, submarine, and air base in view of the possibility of trouble with Italy over the Ethiopian question.

It was announced on December 30 that the Sheik of Kuwait had granted an exclusive oil concession covering all his territory to an Anglo-American syndicate. The death of Ex-King Ali ibn Hussein (q.v.) of the Hejaz in Bagdad on Feb. 14, 1935, removed an old rival of Ibn Saud's from the Arabian scene.

Consult Elizabeth P. MacCallum, "The Arab Nationalist Movement," *Foreign Policy Reports*, May 8, 1935.

ARBITRATION, INTERNATIONAL The *I'm Alone* Case, which had been pending since 1929, was finally settled at Ottawa, Canada, on Jan. 9, 1935, by Willis Van Devanter of the American Supreme Court and Lyman P. Duff of the Canadian Supreme Court.

It will be recalled that the *I'm Alone* was sunk on Mar. 22, 1929, on the high seas, in the Gulf of Mexico, by the United States revenue cutter *Dexter*. By their interim report in 1933 the Commissioners found that the sinking of the vessel was not justified by anything in the Canadian-American Convention of Jan. 23, 1924. The Commissioners added in 1935 that it could not be justified by any principle of international law. Their findings are summarized as follows:

The vessel was a British ship of Canadian registry. After her construction she was employed for several years in rum running, the cargo being destined for illegal introduction into, and sale in, the United States. In December, 1928, and during the early months of 1929, down to the sinking of the vessel on March 22 of that year, she was engaged in carrying liquor from Belize, in British Honduras, to an agreed point or points in the Gulf of Mexico, in convenient proximity to the coast of Louisiana, where the liquor was taken from her in smaller craft, smuggled into the United States, and sold there.

We find as a fact that, from September, 1928, down to the date she was sunk, the *I'm Alone*, although a British ship of Canadian registry, was *de facto* owned, controlled, and at the critical times, managed, and her movements directed and her cargo dealt with and disposed of, by a group of persons acting in concert who were entirely, or nearly so, citizens of the United States, and who employed her for the purposes mentioned. The possibility that one of the group may not have been of United States nationality we regard as of no importance in the circumstances of this case. The Commissioners consider that, in view of the facts, no compensation ought to be paid in respect of the loss of the ship or the cargo.

The act of sinking the ship, however, by officers of the United States Coast Guard, was, as we have already indicated, an unlawful act; and the Commissioners consider that the United States ought formally to acknowledge its illegality, and to apologize to His Majesty's Canadian Government therefor; and, further, that as a material amend in respect of the wrong the United States should pay the sum of \$25,000 to His Majesty's Canadian Government; and they recommend accordingly.

The Commissioners found that the captain and members of the crew of the *I'm Alone* were not parties to the illegal conspiracy to smuggle liquor into the United States and sell the same there.

Accordingly they recommended that compensation be granted to the captain and to the other members of the crew.

Newton D. Baker's term as United States member of the Court of Arbitration at the Hague having expired, he was reappointed by President Roosevelt for a term of six years. Other members from the United States were Elihu Root, John Bassett Moore, and Manley O. Hudson. This Court of Arbitration, set up under the Hague Convention of 1899, is not to be confused with the Permanent Court of International Justice popularly known as the "World Court," also at the Hague, which came out of the Covenant of the League of Nations.

The settlement of the boundary question between the Dominican Republic and Haiti is a further demonstration of the devotion of the republics of the American Continent to the principle of mediation and arbitration and to the peaceful settlement of international controversies. On Feb. 27, 1935, the Presidents of the Dominican Republic and Haiti issued a joint statement concerning the settlement of the last remaining difficulties in connection with the demarcation of their common boundary. On the occasion of the settlement of this question, the Governing Board adopted a resolution sending to the people and Governments of the Dominican Republic and Haiti its cordial congratulations, "in the hope that the shining example which they have set may serve as an example whenever similar disputes may arise between the nations of the Pan American Union."

ARCHÆOLOGICAL INSTITUTE OF AMERICA. A society for the promotion of archaeological investigation and research, founded in Boston in 1879 and incorporated by Act of Congress in 1906. It has largely accomplished its purpose through its American School of Classical Studies at Athens, the School of Classical Studies of the American Academy in Rome, the American Schools of Oriental Research in Jerusalem and Bagdad, the School of American Research in Santa Fe, N. M., the American School of Prehistoric Research at Peabody Museum, Yale University, and the Committee on Mediaeval and Renaissance Studies. In 1935 it had 50 affiliated societies or chapters, with a membership of about 2500. The official organ is the *American Journal of Archaeology*, a quarterly. The officers in 1935 were: President, Louis E. Lord, Oberlin College; first vice-president, David M. Robinson, Johns Hopkins University; general secretary, Clarence Ward, Oberlin College; treasurer, Rollin H. Tanner, New York University; and recorder, Stephen B. Luce, Boston, Mass.

ARCHÆOLOGY. The growing interest in Biblical lands is evidenced this year in the increase in number of sites excavated in the Holy Land or contiguous territory. Mesopotamia also still holds the interest of scholars. Correspondingly less has been done in Egypt and in Greece.

At Alexandria an interesting group of Hellenistic tombs has been found by Dr. Adriani, curator of the Græco-Roman Museum at Alexandria. Here, under a Roman camp, adjacent to the shore at Mustapha Pasha, he located four tombs of Hellenistic date hewn in the native rock and dating not later than the close of the 3d century of our era. They all have a court open to the sky and are executed in the pure Doric style. Particularly interesting is the fact that the walls preserve the fresh colors with which they were decorated. The subjects are riders on horseback. The work was probably done in the time of Ptolemy IV.

At Cairo between the pyramids and the Great Sphinx Professor Hassan has located a trench which leads straight from the pyramid of Chephren to the Sphinx. In all probability the road went all the way from the pyramid to the valley temple, now known as the Temple of the Sphinx. At present, however, the road ends at the Sphinx which leads to the conclusion that the Sphinx was built by Chephren or constructed after his death. Bricks have been found which show that the wall around the Sphinx was erected by Thothmes IV.

The road referred to was used to transport back and forth the statue of the king from one temple to the other. Holes in the sides were cut to receive poles to support an awning for protection against the heat of the sun. On either side of the road were found a number of tombs of which the most important is that of Chephren's daughter, Auser Rehktra. To the east of this burial was located the tomb of a priest of Rehktra, by name Ka-em-Nefert. Strangely enough most of the inscriptions found in this tomb were concerned with the queen. A fresco in the tomb represents the queen standing in the attitude of presenting a lotus flower to the priest. Another tomb in this locality is that of a famous artist who had been employed in decorating the royal tombs. His name was In-Ka-ef.

Besides discovering the road referred to, Hassan has uncovered the front portion of a miniature sphinx in the rubbish lying to the east of the pyramid of Chephren. It is about the size of a lion and gives evidence that the great sphinx dates about 2800-3000 B.C.

One of the most interesting finds made by Professor Hassan this year was two "sun boats" which had been cut deep in the native rock immediately to the south of the cult temple. The "night" or resurrection boat had been covered with 22 massive blocks of stone to render it dark. The boat itself is about 104 feet long and 39 feet deep. The "day" boat is about 94 feet in length. In the neighborhood were found also some 70 statues of Chephren broken to bits. In the tomb of Chephren's priest, Dua-ka, has been found a painting of a nude dancer and other figures which beat time with their hands in time to the dance.

The work of the Egypt Exploration Society this year has been focused, at Tell el-Amarna, on the great palace of Ikhnaton, which reached about half a mile along one side of the main street of the town. A bridge built over the road connected it with the King's private residence. A great hall was found at the southern end of the palace, the roof of which was supported by many piers built of brick. The walls themselves were ornamented with faience plaques showing daisies set into a green ground. At the northern end of the palace, in the harem, the columns were ornamented with pictures of ducks hanging head downward and with likenesses of the royal family. On the wall facing the sunken garden was a picture of a scene on the river Nile.

At Hermopolis has been found an unusual house the front of which resembles an Egyptian pylon. The decoration of the floor shows that it is of the Græco-Roman period. The house was constructed of rough bricks which had been coated with stucco. On the ground floor the rooms were vaulted and the walls were covered with religious pictures. On the second were also four rooms. The first room on the ground floor was public, decorated in the Alexandrian style imitating marble and breccia; the second was a sanctuary where was a tomb. Here was represented the dead, a woman, presenting herself to Osiris.

In Palestine, at Bethel, excavations this year have shown that between 2000 B.C. and 69 A.D. as many as a dozen settlements were made on the site. The first reach back into the bronze age. At Jericho Garstang has found a cult statue dating about 3000 B.C. It is the earliest sculpture that has been discovered in Palestine. At Lachish, 25 miles to the south of Jerusalem, the Wellcome Archaeological Research Expedition has uncovered a large cemetery belonging to the latest copper age. Some of the burials were in small chambers oval in form and approached by a narrow shaft. In the chambers were found food vessels, and daggers and javelins of copper. In the succeeding period the burials were of the contracted variety. The excavations also revealed that the chief defense of the city at this time was a steep revetment which was flanked by a wide trench. Under the rubbish of the city was found a temple built of stone and mud. It contained a small sanctuary into which one penetrated through an antechamber. Underneath this temple was uncovered the temple treasure and much pottery, and on the base of the shrine behind the large altar was found a perfume flask like those known from 18th. dynasty Egyptian pictures. Along with other remains there turned up a number of scarabs bearing the name of Amenhotep III. One scarab carried the name of queen Tyi. In the late Jewish levels were recovered ten pieces of pottery carrying Hebrew writing in ink dating not later than 588 B.C. They give the names of Jeremiah, Mattathiah, Gemariah, and Jaazariah. The name Jahve occurs several times.

The finds on this site make it clear that the original foundation goes back to a time soon after 1403, to a time immediately preceding its revolt from the rule of Ikhnaton. The place fell into ruin at the time of the Babylonian siege just before the time of the first exile. It was rebuilt by the Persians after the return in the time of Cyrus.

At Mizpah the Pacific School of Religion has discovered a large burial cave which explains the manner of burial described in the story of the burial of Sarah. The cave contained at least sixty interments dating from 1200-900 B.C. This seems to indicate a long family history.

At Dura in the rubbish of a circuit wall of the place have been found three painted wooden shields belonging to members of the Roman auxiliaries. They are oval in shape and covered with gypsum upon which were painted classical subjects. The metal bosses which protected the centres have disintegrated. Excavations on the acropolis have brought to light burials reaching from the 3d century B.C. to the time of the destruction of the town. Diggings in the neighborhood of the redoubt have revealed that it rose above a ravine by some 20 feet. Just to the south of the Palmyrene gate has been found a small temple of Zeus Kynos. In front of the tower of the town the excavators uncovered a monumental staircase which led up to the top of the tower. Perhaps the most important find in this place is a piece of horn which may have served as the ornament of a quiver. The design which shows stags finds its nearest parallel in the art of Siberia and south Russia.

At Mari, near Abu Kemal in Syria, the Louvre Expedition has continued its work this year with the finding of a great palace which dates in the third millennium B.C. It was destroyed by Hammurabi about 2000 B.C. In a beautiful state of preservation it is the most complete piece of architecture known from this time. While only a small portion has been cleared as yet, its size may be



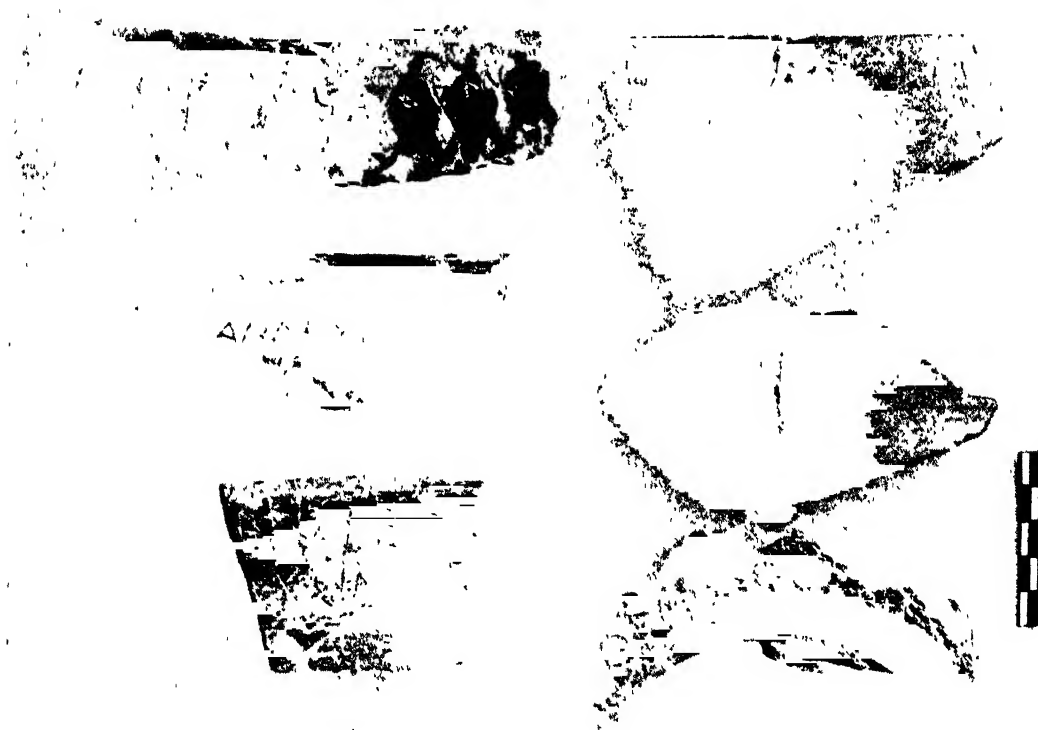
EXCAVATION OF THE AGORA, ATHENS, GREECE.

A view from the southeast

ARCHÆOLOGY



Contents of Geometric Grave, End of the 8th Century B.C.



Ostraca Noted 487-483 B.C.

ARTICLES RECOVERED FROM THE AGORA, ATHENS

imagined from the fact that already 69 rooms and courts, covering 5000 square meters, have already come to light. In places the walls rise to a height varying from 3 to 16 feet. The result is that complete doorways have been preserved. Light was admitted through high doors which opened upon the courtyards. Several of the bathrooms are preserved in perfect condition. Sometimes there were hot and cold baths in each. The floors are well paved with baked brick. The walls of the building were plastered with a coat of mud and chopped straw and in the more important rooms the decoration consisted of alternating bands of black and red or spirals of white and blue. In the building were found two schoolrooms equipped with earthen benches. On the floor lay dishes which held shells for counting. In one small room were discovered 1600 clay tablets dealing with financial matters.

The expedition of the University of Cincinnati has this year completed its fourth campaign on the site of Troy. During the work the area at the northern edge of the hill was examined and found to belong to the period known as Troy I. Here were found a considerable amount of material belonging to at least three houses of the period. These buildings were of a rectangular plan and on the floors were scattered a considerable amount of pottery as well as implements made of stone and bone. Among them were two figurines, one of terra cotta and one of marble. Three infant burials were uncovered, one under the floor of the house and two outside. In the central part of the site, that is in Troy II, the investigators found a group of small rooms which may have served as storerooms. They were connected with the megaron of the house. In this locality was found much pottery as well as many small gold beads, spindle whorls, and many weights for looms, made of terra cotta. On the road lying outside the south gate of Troy VI was discovered a house that had been utterly destroyed by fire. The heat had been so great as to calcine the walls. In the building was a hearth and in one room an oven, a millstone together with many vases.

At Ishchali, near Bagdad in Mesopotamia, Dr Thorakill Jacobsen started his first campaign. The surface strata he found to date from about 1900 B.C., the time of Hammurabi. Behind the gate of the city wall he found a large temple in which were three sanctuaries to which entrance was afforded by a forecourt. An inscription on a cylinder seal proved that the place was dedicated to Ishtar-Kitum. A pavement of baked brick overlaid with bitumen led from the court into the antechamber. At the end of the pavement were found square masonry boxes which served as pivots for the great cedar doors. An open doorway admitted to the cella proper in which was located a statue of the goddess in a niche set in the main axis of the temple so that the worshipers who might not enter the sacred area could see the statue when the doors of the antechamber were thrown open. Among other finds made in the temple was a bronze lamp in the shape of a lion. The most distinguished find was a piece of a stone vase ornamented with figures of kneeling goats of which the eyes were inlaid with shell.

Further work has been done on the site of Sargon's palace at Khorsabad. Here the citadel and two other quarters have been dug. Another palace, just as massively built and about two thirds the size of Sargon's, has been discovered. It breaks through the southwest wall of the town just as the other palace penetrated the northwest wall. In the

building was found the base of a huge monolithic throne. It is possible that the palace was the residence of Sennacherib when crown prince.

The Iraq Expedition of the Oriental Institute of the University of Chicago has continued its investigations at Tell Asmar and at Khafaje, as well as starting the work at Ishchali already referred to. The temple of the god of fertility at Tell Asmar has been completely cleared showing that 26 successive stages can be traced over a period of about a thousand years. At a depth of over 40 feet were found the remains of the original building, which date before 3500 B.C. As a result of the work much light has been thrown on the early dynastic period which is practically unknown on other sites.

At Tepe Gawra, in Mesopotamia, the joint expedition of the American School for Oriental Research and the University of Pennsylvania has finished its fourth season's campaign. Trial pits were dug in a lower part of the tell which seem to prove that the place is possibly the oldest site in Asia. The city now uncovered dates about 3750 B.C.

In the district of Arkalochori in Crete the Candia Museum has discovered gold, silver, and copper axes of the Minoan age. Besides these were found enormous swords. The objects date around 1600 B.C. The most important find was a copper double-ax bearing three lines of hieroglyphic writing. This is the first discovery of such a thing in Minoan digs.

At Kourion in Cyprus the University of Pennsylvania expedition has found that a Hellenistic city on this site was badly wrecked by an earthquake in the late 4th century A.D. Many people were trapped by the falling roofs. The site was of great antiquity, reaching from the neolithic period to the time of the earthquake. The fortification wall (in places 36 feet thick) in its lowest parts dates from the 9th century B.C. Besides the late finds the expedition opened a dozen geometric tombs which contained pottery of a kind not known before.

In Athens the American School of Classical Studies has under the direction of Professor Shear successfully completed its fifth season's campaign in the agora. Many geometric graves of a fairly uniform type have been opened. They were partly cut in the bed rock of Kolonos Agoraios and completed with rubble work. Two Mycenaean burials were also discovered. Among the pieces of pottery recovered were representatives of the work of Euthymedes and Brygos. The latter was of the white ground variety on a spool or hobbin. The subject represented is Helios rising from behind hills or clouds. It is a counterpart of the group of Selene on a cylix in Berlin. One of the most interesting finds is a long list of ostraca which includes all the names of those mentioned by Aristotle as ostracized as well as the names of others who were voted against but who escaped that fate, together with those not previously known. Among those so mentioned are the names of Aristides, Boutalion, Charias, Hierocles, Hipparchus, Callias, Callixenus, Cydrocles, Megacles, Pisisstratus, Themistocles, Thrasycles, and Xanthippus. Callias won the pancration in 472. Twenty-six sherds bear the name of Themistocles. Among the sculptures found should be mentioned a fine archaic head of a bearded man and a close replica of the Venus Genetrix. The latter was found near where the shrine of Aphrodite must have been. In the centre of the excavation was discovered the marble floor of an orchestra, which was covered with a heavy layer of burned material. Behind the Odeum was uncovered a 2d century Roman temple found inside a rectangu-

lar marble structure 217 feet by 123 feet. Nearby was discovered a portico 470 feet long.

At Corinth the most outstanding discovery of the American School is the right forearm of a chryselephantine statue, probably of a woman, which was found in a cistern which had been filled with rubbish in the 3d century B.C. Further digging was carried on in the porticoed building which had been originally used to house shops but had later, in Roman times, been adapted to public use. Here was found a very beautiful example of elaborate incrustation in marble. In one room was discovered a fountain executed in variously colored marbles. The basin is rectangular and so constructed that water trickled at all times over the lip thus intensifying the color of the stone. On each side of the basin is a tall pilaster of purple breccia topped with marble capitals. Bronze spouts also served to keep the upper part of the fountain wet.

At Aquileia in Italy an imperial forum has been uncovered. At Pæstum work has been continued on the site of the Heraeum. The whole area of the sacred precinct has now been explored with the result that the foundations of a temple about 30 by 40 meters has been brought to light. It is larger than the temple of Ceres at Pæstum, but of the same type and of the same age, namely, about 500 B.C. Near the great temple is a small one 9 by 12 meters, dating from 700-600 B.C. Not the least interesting part of the finds is a large amount of pottery of the Corinthian and Proto-Corinthian styles, which point to an earlier building. Along with these finds beneath the temple was located a fine Hera Kouroutrophos. In the area between the two temples were found about 1200 objects, mostly ex-votos. From the old temple were recovered two excellent sculptured metopes, one representing the Rape of Latona by the Giant, Tityos, the other, and the better, showing a centaur.

Recent digging on the Aventine in Rome has uncovered a temple of Jupiter Dolichenus and a statue of the god. The figure holds a thunderbolt in its left hand and a double ax in the right. At Rodi an important find has been made of pottery and jewelry in the form of crowns, rings and buttons. The most remarkable find is a large bowl of silver ornamented with palmettes enclosed in spirals, or volutes ending in the heads of swans. During work on the Cathedral at Trieste the workmen uncovered the ruins of a basilica and a theatre.

At Avebury, in England, has been unearthed the largest megalithic stone circle known in the country. The place embraces about 29 acres and was originally enclosed with unhewn stones of different heights. Some of those still standing are 20 feet in height. Evidence points to the theory that the circle is to be associated with different cultures. For example, the stone circle almost beyond doubt belongs to the time of the "beaker" folk, who came into England about 1900 to 1700 B.C. from Holland and Germany.

At Chichester a large Roman amphitheatre has been laid bare outside the eastern city wall. It was built of chalk, limestone, flint, and Roman bricks. It is dated by the discovery of coins of Antoninus Pius and Domitian. At Colchester has been discovered a Roman temple of the 1st century of our era.

ARCHITECTS. THE AMERICAN INSTITUTE OF. A society, founded in 1857 to unite in fellowship the architects of the United States and to combine their efforts so as to promote the æsthetic, scientific, and practical efficiency of the profession. The membership of its 68 local chapters in 1935 numbered

more than 3400 of the 7000 practicing architects in the United States.

There was continued, under a modified programme, during the winter of 1935-36, the survey of historic American buildings, inaugurated by the Civil Works Administration and the Department of the Interior so as to provide employment for many architects and architectural draftsmen. With the assistance of the presidents of the institute's local chapters this work was organized on a regional basis. There were filed in the Library of Congress sketches and photographs of many important historic edifices in these districts. Each building was accurately measured and drawn so as to permit its reconstruction, if desired, at some future date.

The official organ of the society is *The Octagon, a Journal of The American Institute of Architects*. The officers elected at the convention held in Milwaukee, Wis., in May, 1935, were: President, Stephen F. Voorhees, New York; first vice-president, Louis La Beaume, St. Louis, Mo.; second vice-president, Francis P. Sullivan, Washington, D. C.; secretary, Charles T. Ingham, Pittsburgh, Pa.; and treasurer, Edwin Bergstrom, Los Angeles, Calif. The executive secretary is Edward C. Kemper. Headquarters are in The Octagon, 1741 New York Ave., Washington, D. C.

ARCHITECTURE. The year 1935 was in many ways a discouraging one, although the amount of building was markedly greater than in the year before. Nevertheless, due to chaotic political and economic problems still unsolved, the production was most uneven in quality. Even along the lines of low-cost housing, where the promise was greatest, the results were generally disappointing; even in England the greater part of the tremendous production of small houses was utterly without any evidence of novel thinking—much less of architectural distinction. In Germany rows of tiny gabled houses, often without conveniences, set out monotonously on unstudied streets, were the rule; in France the H.B.M. (*Habitations à bon marché*) produced generally rather conventional and cramped types of French tenement, though exceptions to this are found. Italy's building efforts seem to have been chiefly along other and more monumental lines. The U.S.S.R., in spite of frenzied building of apartments and houses—many of which were well-planned along modern lines, hardly more than kept up with the enormous annual increase in population. In the United States the great promise of large Federal expenditure for the low-cost housing was pared down eventually merely to build a few "demonstration" units in different parts of the country. The question of adequate housing for a large section of the world's population was thus still entirely unsolved; and, unless legislators and governments generally adopted a much more realistic view of such matters as land values, costs, interests, and subsidies than is now apparent, it would continue unsolved. And in the meanwhile the building industry was working all over the world at a fraction of its capacity, while unemployment in the building trades was heavier everywhere than in any other comparable field.

The United States. The pouring of money into new Federal buildings produced more quantity than quality. The famous Washington Triangle reached substantial completion; its enormous bulk of concentrated office space not only complicated the already difficult traffic problems of the city, but also threw completely out of balance the great main Mall axis through the Capitol. Rich, built of beautiful materials, and majestic with classic

detail as they were, nevertheless as a whole they were so crowded that individual effect is lost; and the classic detail was in many cases so obviously useless, and applied with so little regard to function, that its majesty was severely compromised. Cret, in the Folger Shakespeare Library, and Goodhue, in the National Academy of Sciences, showed the possibilities of building in harmony with the older work in Washington, without ostentatious parade of applied classic forms that have lost their relevance to this age. Somehow, the more pretentious buildings of the Triangle produced even on many laymen the impression of a costume party. The parking problem for employees' cars was a terrific one, and a beautiful circular court—like that in front of the Post Office Department—necessarily loses in effect from being filled with the black tops of automobiles. The Building for the Department of Labor and Interstate Commerce was designed by the Supervising Architect's Office of the Treasury and Arthur Brown; the Post Office Department by Delano and Aldrich; the Department of Justice by Borie, Zantzinger, and Medary; and the National Archives Building at the narrow end of the site, a building undeniably impressive in its unbroken stone walls and monumental Corinthian portico, by John Russell Pope.

The new Supreme Court Building, by Cass Gilbert and Cass Gilbert, Jr., opposite the Capitol, was completed and opened.

Outside of Washington a much more creative spirit fortunately controlled Federal building. Thus the Philadelphia Post Office, by Tilden, Register & Pepper and the Supervising Architect's Office; the Post Office at Trenton, N. J., by the Supervising Architect's Office; the new San Francisco Mint, by C. S. Underwood; and the Minneapolis, Minn., Post Office, by Magnay and Tussler, were all examples of an extremely simple monumental style, distantly based on classic ideals, though without archaeological details, which was more and more becoming the accepted American manner for public buildings. It was even seen in Washington itself in the Central Heating Plant of P. P. Cret. Smaller post offices like those for Chicago designed by H. L. Cheney and J. C. Bollenbacher showed more informal types in the same general style.

The Wichita Art Institute, Wichita, Kansas, by Clarence Stein, was an interesting variation from the usual art museum, very simple, with a rich main entrance decorated with elaborate cast-stone ornament in color. The Prospect Park Zoo, Brooklyn, N. Y., by the New York Park Department architects under Aymar Embury II, was an interesting group in brick and stone that continued the high standard set in the Central Park Zoo, in plan, its greater area allowed a more interesting layout in a wide semicircle. The buildings built by the Indian Bureau of the Department of the Interior, designed by Mayers, Murray, and Philip, were remarkable examples of fresh design whose forms were allowed to grow naturally from the materials used and the local conditions. The Tribunal Council Group for the Navajo Reservation in Arizona, and the Hogan Day School for the Southern Navajo, showed virile and simple masonry forms; the Sawmill School for the Northern Navajo, with its bold use of timber, was strikingly different. Other public buildings worthy of notice were the Library at Cornwall, New York, by E. A. Matthiesen; the American Institute of Pharmacy Building, Washington, by John Russell

Pope; the Custom House Addition, Denver, Colo., by Buell and Mesick; and especially a remarkable Municipal Incinerator, Shreveport, La., by Jones, Roessle, Olschner & Wiener, which showed how pure function could, when rightly handled, produce a structure of marked and expressive beauty. The San Francisco County Jail, by Roller and Reidy, had something of the same direct simplicity, but its relation to its site was harsh and unorganic.

Of the year's hospitals, three stood out; the Miller Hospital, Duluth, Minn., by Ellerbe, Erickson & Co.; the additions to the Meadow Brook Hospital, N. Y., by John Russell Pope and W. F. McCulloch; and the great Los Angeles City General Hospital, by the Allied Architects Association of Los Angeles (Bergstrom, M. Hunt, Davis, S. Hunt, and Richards). The last was magnificent in its powerful, direct, expressive volumes.

Church design in America remained basically conservative. The Trinity College Chapel, Washington, D. C., by Murphy and Olmstead, used an early Renaissance type of decoration on a simple tile-vaulted interior; it was admirable in having no interior columns. St. Augustine's, Bridgeport, Pa., by Henry D. Dagitt and Sons, and the East Liberty Presbyterian Church, Pittsburgh, Pa., by Cram and Ferguson, were both Gothic. The last was one of the most lavish church buildings of recent years. Occupying with its parish house an entire block, the church group was dominated by a great central spire which rose magnificently in a series of decreasing vertical stages so that the whole had a generally spire-like outline. This tower was definitely original and struck a fresh note in modern Gothic design.

Discouragingly few schools or other educational buildings of other than strictly routine types were built during 1935. An exception was the Wyandotte High School, Kansas City, Mo., by Hamilton, Fellows, Nedved, and Radotinsky. This large group, though basically conservative in plan conception, was open, inviting, and much more airy than the usual high school. Much more important for the future of school design, however, were a number of recent schools in Los Angeles, especially those by R. J. Neutra. The Corona Ave. Public School, for instance, with its large glass areas and its pleasant breadth, recalled some of the best of the recent Dutch schools.

The most important competitions of the year were those for the Federal Reserve Board Building, Washington, won by P. P. Cret, and that for additions to the Art Institute, Chicago, won by Holabird and Root. It is noteworthy that this latter winning design was much the most "modern" of those submitted; it included a new façade of daringly simple vertical openings in the centre, flanked by lower, projecting wings treated with horizontal banded windows.

The continuation of financial uncertainty was particularly unpropitious for commercial and industrial building. The largest commercial structure completed was the International Building, Rockefeller Centre, New York, by Reinhard and Hofmeister, Corbett, Harrison, and MacMurray, and Hood and Foulhoux, associated. Its plan was in many ways a marked improvement over that of the main building; the entrance halls and corridors gave more sense of space and direction, and in general its use of materials and its lighting were both more imaginative. Its exterior sculpture, however, was most disappointing. Other interesting commercial buildings were the Remington-Rand Building in Washington, by Holabird and

Root; the Postal Life and Casualty Insurance Building, Kansas City, by E. W. Tanner; the East River Savings Bank Building, New York City, by Walker and Gilette; and the large, "windowless" Sears-Roebuck Store, Chicago, Ill., by Nimmons, Carr and Wright. Among industrial buildings, the Power Plant of the General Electric Company, Schenectady, N. Y., designed by the plant engineers, was revolutionary in cutting the amount of the building to an absolute minimum, leaving much of the machinery exposed in the open air; the effect is distinctly interesting. Another excellent and interesting structure is the Cashman Laundry Building, New York City, by Russell G. and Walter M. Cory.

The Federal Housing Administration seemed to have been eminently successful in stimulating house construction, and the financial recovery that was present in many industries undoubtedly aided as well, so that 1935 was a year in the United States of tremendous increase in the quantity of new domestic work. Much of it was, of course, purely speculative and purely conservative; advance in this type of work was limited strictly to the introduction of more and more gadgets to snare the wily customer—frequently at the sacrifice of real convenience of design and permanence of structure. As a whole, the entire real estate business was still completely cold to any creative innovations in either plan or style. Prefabrication was similarly frowned upon; although there were many large financial interests that were supporting studies along this line, the net results had not been too promising.

In the larger and more costly types of house, the turning to contemporary ideals in both plan and appearance was marked. For the first time these new and glittering houses, with massed windows, great window areas, roof terraces or flat roofs, and usually without ornament, were sufficiently common—especially in Southern California—to allow their evaluation on their real merits and not as curiosities. And any such evaluation must prove—at least to those not in love with some sentimental imagined traditional picture-house—that these new and contemporary houses are more airy, more convenient, more beautiful for us; and that they can be equally well designed to harmonize with any given landscape. Typical of this new acceptance of contemporary architecture was the award of the gold medal of the Better Homes in America annual competition to the Beard House, Altadena, Cal., by R. J. Neutra, remarkable for its simplified, open plan and its great window areas. Other houses somewhat similar in style were the Anna Sten House, Santa Monica, Cal., by R. J. Neutra; the Scheyer House, Santa Monica, Cal., by Neutra and Ain; the Taylor House, Berkeley, Cal., by M. Goodman, interesting for its use of oiled plywood as an exterior surfacing; and the extraordinary Oliver house at Los Angeles, by R. M. Schindler. Contemporary design of a less definitely stylistic type was widespread. Characteristic examples were the Jobyna Howland house, Beverly Hills, Cal., by Lloyd Wright; the Lefferts house, Wilton, Conn., by Evans, Moore, and Woodbridge; a week-end house at Redding, Conn., by Herbert Lippmann; the interesting Burnham villa at Michigan Center, Mich., by John L. Wright, built on a steep hillside; "Square Shadows," Whitemarsh, Pa., by George Howe; and the Enders house, Avon, Conn., by Talcott and Talcott. The two most interesting examples were probably the lavish Mandel Villa,

Mt. Kisco, N. Y., by Stowe and Deskey, using gracious curved forms in a manner recalling some of the best English work; and the unique house in Minneapolis, Minn., by Frank Lloyd Wright, exquisite in the simple directness of its plan and its knowing and beautiful use of materials.

Even in the majority of the houses built with no effort at stylistic modernity, the effects of the modern movement were evident in freedom of plan and treatment. Characteristic were California houses by John Byers, W. W. Worster, and Ralph C. Flewelling, and eastern houses by A. T. Remick, Charles Keefe, and especially the lovely Greek Revival or Directoire house at Peacock Point, Long Island, by Stevenson and Studts.

Of the various types of Federal relief housing, the resettlement and TVA villages were more interesting sociologically and economically than architecturally. Red House and Reedsville, West Virginia; Woodlake, Texas; Osceola, Kansas; and Crossville, Tennessee, were characteristic. Of the large urban groups which were financed through Federal loans, the most interesting were the Carl Mackley Houses, Philadelphia (for the Hosiery Workers Union), by W. Pope Barney and Kastner & Stonorov; and the Hillside Apartments, Bronx, N. Y., by Clarence Stein. T. H. Englehardt's Boulevard Gardens, Queens, N. Y., was more conventional. The Philadelphia group, comprising 284 apartments, was three stories high and attractively grouped around ample open spaces. Social facilities such as kindergarten, supervised play spaces, and a pool were included. Some controversy was caused by the government's insistence on such a high rental level to protect its investment that the project's usefulness to the group for which it was designed was seriously compromised. The Hillside Housing in New York was the largest of the projects, comprising nearly 5000 rooms, in 1416 apartments. Renting at an average of \$11 per room per month, it was obviously a "white collar" project. It consisted of buildings four to six stories high (the six-story unit having elevators), grouped around one very large and several small courts. Playgrounds, an auditorium, and workshops and clubrooms were provided, as well as indoor playing or kindergarten space. The plans were remarkable for the high proportion of units with cross-ventilation and the large size of the rooms. Exteriors were severely—perhaps unnecessarily—plain, but the planting of the courts (designed by Marjorie Cautley) was both practical and extremely effective. Although this group made no pretensions of hitting the problem of really low rentals (for New York \$6 per room per month is all that can be paid by at least a quarter of the population), it was technically perhaps the most advanced study in space utilization America had yet made.

The Federal Housing Administration had 49 projects approved as of Nov. 8, 1935. These may serve at least to demonstrate the possibilities of what a really large scale Federal housing movement might achieve. They have at least demonstrated that *without large public outright grants it is utterly impossible to build in America today to meet the low rentals much of our working population needs*. Naturally real estate interests were usually completely hostile to any such grants, or even to any realistic attack on America's pressing housing problem, and succeeded in having the amounts allocated for housing cut drastically from the original plan. For instance, New York City was originally to have \$45,000,-

000; this was cut to \$17,000,000, covering but two projects—Williamsburg, to contain 1625 units, and Harlem-McCombs Place, to contain 574. Of other approved projects, the largest were those for Boston, Chicago, Cincinnati, Cleveland, Indianapolis, and Memphis. The whole housing movement, which included a number of villages planned by the Resettlement Administration, was still further confused by increasing uncertainty as to the U.S. Supreme Court's attitude towards the problem. If the "general welfare" clause was to be interpreted as narrowly in housing cases as it was in the case of the AAA, it is possible the whole movement would be declared unconstitutional. The resulting chaos, with projects in various stages of construction, could be imagined. Senator Wagner, of New York, sponsored a bill to put Federal aid to low-cost housing on a firmer, continuing basis.

Great Britain. As in the United States, the most interesting building of the year has been public building or residence building. England, particularly, was enjoying a period of intense building activity which, but for its apparent basic soundness, might be termed a boom. And it was almost all building of which the general artistic level (outside of the speculative real estate field) was unusually high. Particularly noticeable was the large proportion of buildings for social advantage, like the large group of pithead baths and employees' facilities built in mining centres. The Pithead group at Sherwood, Notts., by A. J. Saise, was characteristic of the high artistic level reached. Other important work of permanent social usefulness included work at the Hendon Cottage Hospital, by Wallace Marchmont, simply handled in a modern brick and stone version of Georgian; the more conservative Foundling Hospital, Berkhamstead, by J. M. Sheppard; the Infants Hospital, Vincent Square, London, by Hall, Easton, and Robertson, with a lovely treatment, entirely novel, of shining metal-railed sun balconies; the Youth Hostel, Holmbury, St. Mary, by H. V. Lohb; the Talbot High School for Girls, Bournemouth, by J. H. Worthington, and the interesting swimming pool, Woodside Green, London, by R. J. Duke.

The two buildings of this class which best expressed the creative tendencies of present-day British architecture were the Pioneer Health Center, Peckham, by Sir Owen Williams; and the Bexhill Pavilion, by Mendelsohn and Chermayeff. The Peckham building, containing gymnasias, special exercise rooms, and a large swimming pool, was a magnificent example of Sir Owen's virtuosity in handling reinforced concrete and large glass areas; he was rapidly becoming one of the world's most important structural designers in his continuing imaginative exploration of the possibilities of new methods of building. The Bexhill Pavilion is a long, low building with those suave and gracious lines we should expect from Mendelsohn; it contained an auditorium, a library and reading room, and a hall fronting on a wide seaside terrace. Lubetkin and Tecton's Elephant House at the Whipsnade Zoo was an interesting composition of four large circular enclosures tied together with a broad cantilevered slab for a shelter.

The two best examples of government buildings of 1935 were the new Municipal Buildings at Dudley by Harvey and Wicks, and the beautiful group of Hornsey Town Hall by Reginald Uren. The latter was lovely in its simple fenestration and its strong high tower; it somewhat resembled

much modern Dutch work. In commercial work, outstanding examples were a Factory Administration Building at Birmingham, by Bye, Sims, and Gifford and S. T. Walker, associated, interesting in the contrast of long bands of glass with a curved projecting bay; the interesting and unconventional interiors of the motorship Orion, by Brian O'Rourke; and the Car Service Station at Catford, by C. Kirby.

The British system of government-assisted housing seemed to be working well so far as the production of houses was concerned. In the last 10 years a total of 1,232,076 living units (apartments or houses) were built with this assistance—809,000 by local authorities, the balance by private enterprises. About 17,000 units had also been built by local authorities without assistance. This figure of about 1,250,000 units compared with a total of 1,425,000 built by private enterprise unassisted during the same period.

Much interesting urban housing was completed during 1935. The London work included apartment groups in St. Pancras, by Connell, Ward & Lucas, interesting in its use of balconies; but the best examples were St. Andrews Gardens in Liverpool by L. H. Keay and the Smedley Point Group in Manchester by Leonard Heywood. The latter, an oval group stepping down a definite slope, was especially interesting, both in plan and appearance.

Many large apartment buildings for high rentals were built. Representative examples were Landsdowne House, London, by Wimpers, Simpson, and Guthrie; Dorset House, London, by T. P. Bennett and Son; Winchester Court, Vicarage Gate, London, by Martin Smith and Beswick, a beautiful design with a curved end and alternate areas of simple windows and recessed balconies; Cholmely Lodge, Highgate, London, by Guy Morgan, noteworthy for its curved plan along a diagonal street; and especially the High Point Flats, Highgate, London, by Lubetkin and Tecton, a lavish and beautifully handled example of the most advanced and unconventional design. Outside of London, the Palace Court Hotel, Bournemouth, by A. J. Seal and Partners, deserved notice; and Embassy Court, Brighton, by Wells Coates, was perhaps the best example of the advantages of contemporary design for a seaside resort hotel.

Of the great number of beautiful houses of the year, the following were especially successful: a concrete house at Hatfield, by F. R. Yorke; Kinrea, Esher Place, Surrey, by C. Barman; row houses at Plumstead, by Lubetkin and Tecton; a house at Chalfont St. Giles, by Mendelsohn and Chermayeff; and a house at Wentworth, by Oliver Hill.

The most important work in the British Colonies was the large building for the head office of the Hong Kong Shanghai Bank, at Hong Kong, by W. Wilson of Palmer and Turner. This was a tall, American-looking building, with stressed vertical lines; it was remarkable because of its windowless ground floor.

France. Despite financial depression, the amount of building in France continued large, much of it under local or central government auspices. Much school building, continuing the trend of the past two years, was rapidly making France a country of the best and most up-to-date schools, instead of one of the most backward. Especially interesting were the Open Air School at Suresnes, by Baudouin and Lods; and the Groupe Scolaire of Lyons, by Roux-Spitz. Other 'good educational

groups were the Lycée Camille-Sée, Paris, by P. Giroud; the École Nationale professionnelle at Vizelle, by Fournez and Sainsaulieu; and the Cité Scolaire of the École vétérinaire at Alfort, by E. Bois.

The best French public buildings were, as in England, buildings for popular use. Especially fine were the Municipal Swimming Baths at Bordeaux, by Madeline; the sport buildings at Dijon, by Parisot and Barade; the stadium "Suze" at Alfort, by Brillard de Laujardinière and Puthomme; and the "Plage" at Lys-Chantilly, by Tiercinier. All set a standard of gay and clean beauty that was worthy of wide emulation. Interesting also were the Maison du peuple, Belfort, by P. Giroud; the Strasbourg Y.W.C.A., by Jean Sorg; and the large and airy abattoir, La Villette, by Fournier, with a glazed concrete vault.

Of administration and other similar administration buildings, the best were the Paris Post Offices of the 5th Arrondissement and at the Parc des expositions, by Boileau and Azéma; the telephone office building in Paris by Débat-Ponsan; and the beautifully simple storage building for the Bibliothèque Nationale at Versailles, by Roux-Spitz. At Havre, the new Maritime Station for the transatlantic liners of the C.G.T., by Urbain Cassan, showed more careful study of circulation than of appearance; the new railroad station by H. Pacon combined both. Architects had, of course, a large share in the interior design of the great ship *Normandie*; Pierre Patout designed the great dining hall, and other interesting interiors were by de Boijen and Expert, and Pacon. Especially interesting were all-metal staterooms by Mme. Klotz and by R. Mallet-Stevens.

French churches, as in previous years, varied between the traditional and the functionally modern. The attempts at compromise between the two ideals were generally unhappily incoherent; the most interesting were the new church at Gentilly by Paquet and de Vasselot, of generally romanescque inspiration, and the domed church of St. Martin, Paris, by Liétard and Bouterlin.

Low-cost housing was being built on a large scale. Usually it took the form of apartment house groups near industrial centres. Notable was the work at the Cité de Charenton, by Maurey; at Sèvres, by Gutton and Ranfaing; at Le Plessis-Robinson, by Payret-Dortail; at Maisons-Alfort, by Hummel and Dubreuil; and at Colombes, by Tréant-Mathé and Champy. Ali Tur's apartments for the City of Paris were also excellent. Of larger apartments of high class in Paris, the best were those on the Avenue Dode de la Brunerie, by Ali Tur; on the Rue de Cevennes, by C. and H. Delacroix; and the apartment on a long narrow site on the Boulevard Victor, by P. Patout.

Private houses, like churches, seemed often still to be struggling between two conflicting ideals. The more progressive types were well shown in a beautiful house in Paris by C. & H. Delacroix, with a colonnaded roof terrace, and two villas by Le Corbusier and Jeanneret, one near Paris and the other on the Riviera.

Germany. The consistent development of German architecture away from creativeness to sterile sentimentality continued almost unchecked, except that in certain localities—notably the Hamburg district, the Ruhr and Rhenish cities, and, in part, the Stuttgart region—the contemporary, logical approach of the pre-Hitler epoch had become so deeply a part of the tradition that much work there in 1935 was still refreshingly logical and

imaginative. German churches also as a whole were exceptions to the usual sentimentality of the present architectural trend. Thus, the Gynecological Clinic at Stuttgart, by A. Schneck; the Iron Institute Laboratory at Dusseldorf, by P. Bonatz and Petersen and Köngeter; the open, simple, and airy office building in Cologne, by W. Riphahn; various houses near Altona, by R. Lodders; F. Schleifer's houses at Altona and, by exception, at Berlin; and some of the new houses at Stuttgart—these continued earlier advances in design. Similarly, St. Joseph's Church at Hindenburg, by D. Boehm, was interesting in its powerful use of great brick arches; the Protestant Church and Parish House at Stuttgart, by E. Leistner, and the church at Niederbomsfeld in Westphalia, by Wach and Roskotten, were both imaginatively and freshly conceived. Otto Bartning's Markus Kirche, at Karlsruhe, attempted to combine modern rectangularity with traditional forms, its apse was especially good.

The new trend away from all that the 20th Century means was well illustrated by the National Socialist School at Erwitte, built around a castle and decorated with all the old stage-set picturesqueness of high roofs and half-timber, designed by Görres, Kornowsky, and Koch; by the theatrically impressive Hindenburg Monument at Hindenburg, by W. & J. Kruger, built on the plan of a medieval castle, complete with a great court and massive towers; by a number of small Bavarian post offices; and by the rich and meaningless interiors of the Horst-Wesel-Haus in Berlin, designed by the Prussian State Architect's Office.

Of much rural housing, the best example is probably Ramersdorf, outside of Munich, by Guido Harbers. Here at least some attempt was made to give a coherent general plan to relieve the monotony of the tiny high-gabled houses.

Italy. Extravagant building of public buildings of all kinds, and of magnificent public works, continued in Italy. All of it was eloquent of a rather undisciplined but exuberant creativeness and vitality; little by little Italy was developing a vivid style of its own, a synthesis of two movements in earlier work, often conflicting but now harmonized—the movement towards a powerful but heavy neo-classic, and the movement towards pure functionalism. The imaginative and impressive new Post Office at the Lido-di-Roma, by A. Mazzoni, with its circular colonnade around a pool, was characteristic, as was, in a different way, the enormous garage at Venice. Many new buildings in the new town of Sabaudia bore witness to the same taste. They were by Cancellotti, Montuori, Piccinato, Scalpelli, Frezzotti, and Vicario. The Municipal Swimming Bath at Milan by L. Secchi had a most impressive concrete vaulted interior; and the new Elementary School in Trent, by A. Libera, was a most interesting group of novel yet logical forms. Good heliotherapy pavilions were built at Rome (in connection with the Foro Mussolini) by E. Del Debbio, and at Ispra, Lago Maggiore, by A. Mazzoni; Umberto Nardo's day nursery and home in Trieste was characteristic.

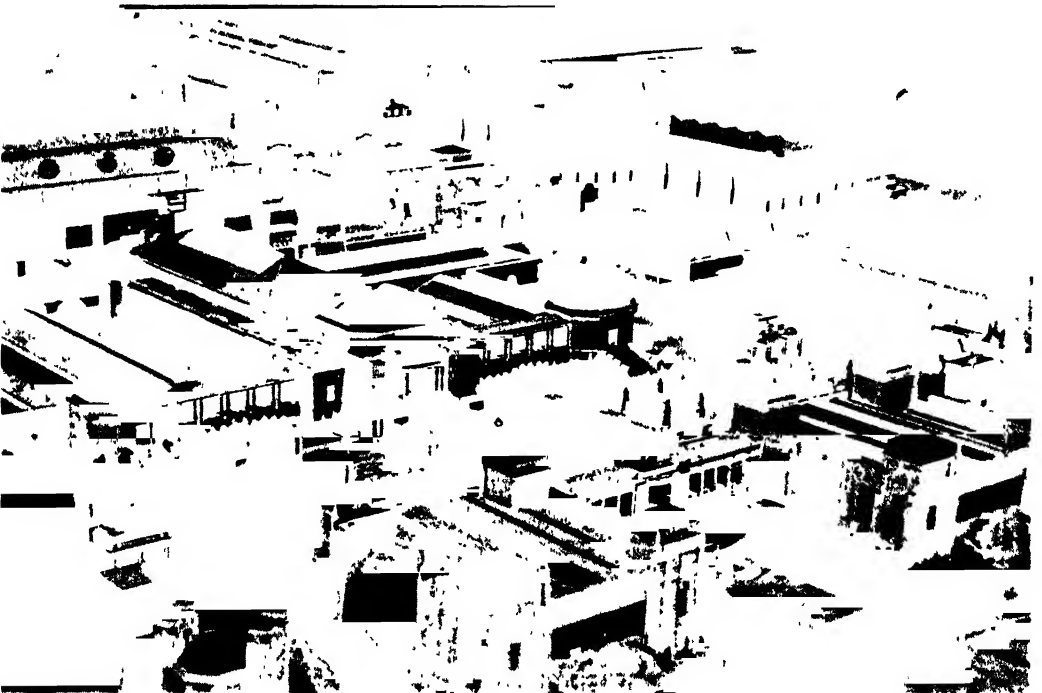
The old, neo-classic and neo-baroque manner still governed much memorial and church work. The Chapel of the Institute of the Sta. Corona, at Pietra Ligure, by P. Mezzanotte, was an example, as was the Funeral Chapel at Velletri, by A. Pettrignani. The most successful example was the Cimitero Monumentale del Grappa, by G. Greppi, with sculpture by G. Castiglioni, an impressive



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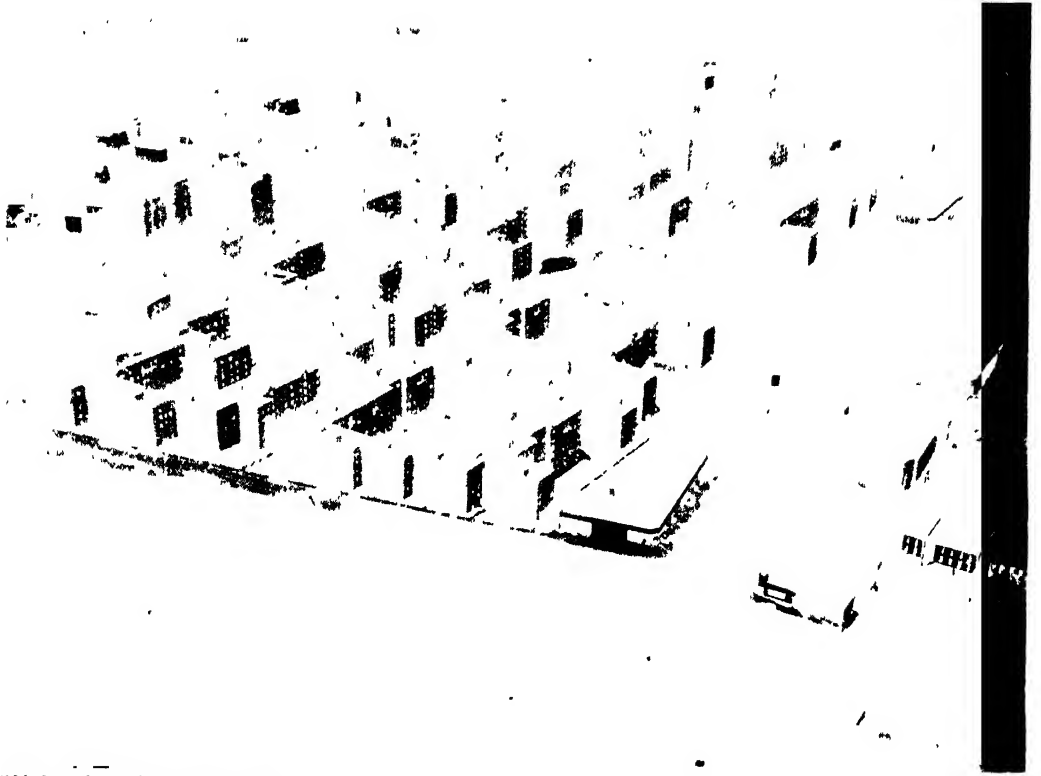
THE WASHINGTON TRIANGLE

An air view of the new Federal Construction Programme. In the foreground is the Archives Building followed in succession by the Justice, Internal Revenue, Interstate Commerce, Labor, and in the background, the Department of Commerce Buildings. At the right next to the Internal Revenue Building, is the old Post Office, while following behind it are the new Post Office, the Customs, and the District Buildings.



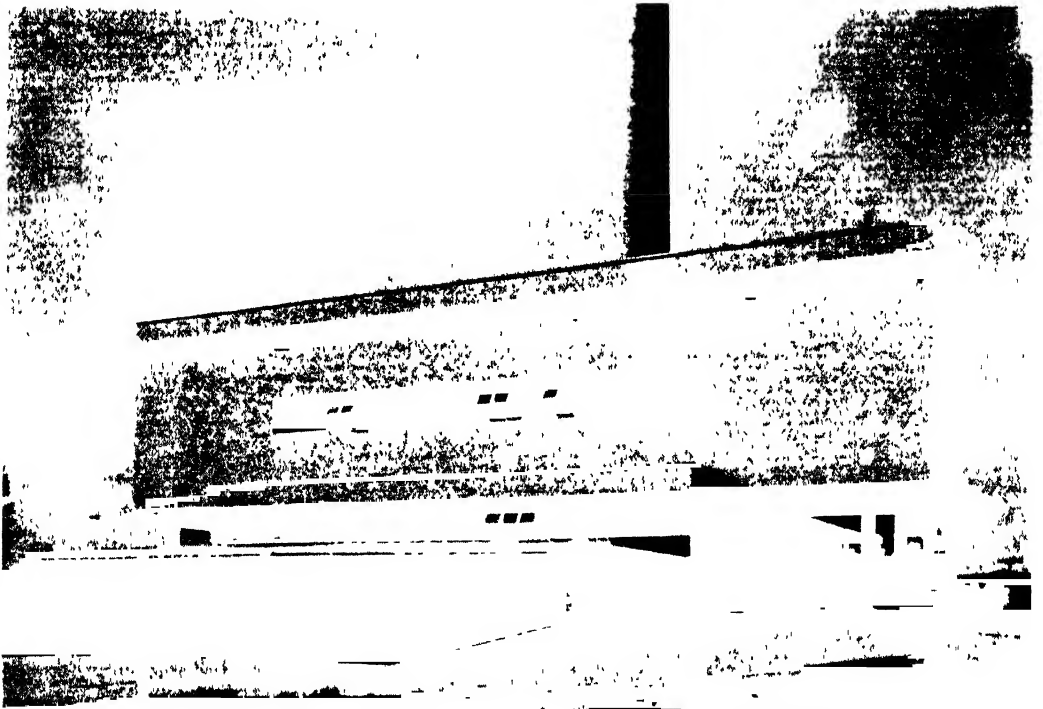
Wide World

INTERNATIONAL EXPOSITION, BRUSSELS ARCHITECTURE



"McLaughlin Aerial Surveys"

HILLSIDE HOUSING PROJECT, BRONX, N. Y.



Courtesy of Jones, Roessle, Olschner & Wiener

MUNICIPAL INCINERATOR, SHREVEPORT, LA.

composition of low cylindrical stages, rising one above the other like a man-made hill. The same sort of neo-classic influence controlled in the large new group for the University of Rome, by Foschini, Aschieri, Michelucci, Capponi, Pagano, Ponti, and Rapiscardi, under the general direction of M. Piccentini.

The much discussed Railway Station at Florence, completed just at the end of the year, by Baroni, Berardi, Gamberini, Guarnieri, Lusanna, and Michelucci, showed, on the other hand, a predominance of the functionalist approach. Most interestingly composed of simple planes, with an admirable balance of vertical and horizontal motives, and excellently planned, it was one of the outstanding modern stations of Europe. Italian urban housing still remained disappointing in comparison with apartment design in Europe north of the Alps, but many private houses, large and small, ranked high as examples of 20th century domestic architecture.

Scandinavia. Architectural work in the Scandinavian countries continued its progress unabated; its quantity and its quality alike bore eloquent witness to the high standard of living that characterized them, and to the creative zest that seemed to accompany it. Especially important was the large amount of housing that continued to be built around Gothenburg and Stockholm in Sweden, as well as the growing number of single small houses, in attractive and accessible suburbs, built under municipal auspices. The best of the year's Stockholm apartments were the Kungsklippan and Kungsholmen, by Sven Wallender, and others by Einar Eriksson, by Walter Gahn, and by Sven Lind. All were direct, convenient, modern. The most original was the Kollektivhus, Stockholm—a long, narrow studio apartment building, with an interesting arrangement of sitting balconies and an unusually complete assortment of communal facilities. It was designed by Sven Markelius.

Danish work of 1935 was slightly more standardized than that of Norway and Sweden; the simplest rectangular patterning was the basis of most of it, and richness and variety was achieved by grouping and by the use of different materials. The new University Buildings at Aarhus, and the Aarhus Municipal Hospital, both by Fisker, Møller, and Stegmann, were characteristic; the same architects' large group of low-rental apartments in Stockholm revealed a similar kind of design. The large school at Kathrinedal, by K. Gottlob, was an impressive example of the lavishness of much current Danish school work. The Abattoir at Copenhagen, by Holsøe, was important.

In proportion to its population, the building in Finland was amazingly high both in quantity and quality. Finland has made contemporary architecture its own chosen style, and developed freedom within it, with a unanimity unequaled anywhere else. So generally high was the level of achievement that particularizing individual works was difficult. Characteristic and important works are: S. O. K. Building, Jyväskylä, by Aulanko and Rauhama; the Cooperative's Flour Mill, Vupuri, by Aulanko and Huttunen; the Sulphate Mill at Oulu, by Alvar Aalto; the important Helsingfors Fair Building, by Hytonen and Luukkonen; the impressive Town Hall at Kotka, by E. Huttunen; and the Vulcan Co. Match Factory at Aabo, by H. Wahlraas. Among the imaginative if sometimes eccentric Finnish churches, examples by A. Wilberg, O. Kallio, T. Paatela, and E. Pitkanen are worthy of notice. Important residential work includes the large store and apartment building in

Helsingfors by G. Juslen, the Helsingfors apartment house of M. Valikangas, and attractive private houses by E. Seppala and by Vaajakoski.

U.S.S.R. The large construction programme in the Soviet Union persisted; its quality was extremely variable. The desertion of functionalism as a basis had left Russian architects floundering in a strange morass of undigested "styles." The period was one evidently of frenzied experimentation. The lavish stations of the Moscow Metro illustrated this; they varied from such monumentally simple and impressive vaulted interiors as those of J. A. Fomin to the vulgar pseudo Renaissance of the Crimea Place Station by Kroutikoff and Popoff. In general there was in Russia more free expression of individual architects' ideals and less regimentation than almost anywhere else.

Of the more "modern" and functionalist work, the best was centred largely in Leningrad and the Ukraine; Moscow tended to more "classic" types. Le Corbusier's great building for the Ministry of Light Industries in Moscow, the "Centrosius," like the large building for the leather industry by Efimovitch, was of course in the most modern manner, but the new Moscow schools—characteristic examples are by Machinsky, Zvezdin, and Arkin—are chiefly in an amorphous pseudo-classic. The great Lenin Library at Moscow, by V. Stchouko, was expressive of the synthesis of classic dignity and richness with modern functional efficiency, which was the ideal the majority of thinking Soviet architects are aiming at. Eventually a new and characteristic style may grow from this, but in 1935 few architects seemed able to handle this synthesis as well as Stchouko does. The apartment house for the Siroff local Soviet in Leningrad by T. Trotsky, as well as his administration or borough hall there, were excellent; so was the direct expression of the social and recreational building of the Aviochun factory between Leningrad and Moscow, by N. Metlin. It was interesting to note that new buildings in villages and for communal farms generally followed traditional forms and techniques; naturally their plans were entirely different, with a definite attempt to raise living standards. Notable also was the attempt being made to stimulate local styles and traditions in Armenia and in Central Asia.

Other Countries. The depression had apparently brought almost to an end the building of low-cost housing in the Netherlands, and severely restricted other types. Notable achievements of the year were the new Boymans Museum at Rotterdam, by A. Van der Steur, and the new Hague Museum, the last work of the late T. Berlage. The former was carefully planned, effective in exterior design in an unforced simple style; the latter was more complicated, more obviously "modern," but less directly laid out. Both were characterized by carefully studied gallery planning and lighting that is said to make them in these respects the finest museums in the world.

The old leadership in daring and inventive design making the utmost use of new forms and materials that once was Germany's seemed largely in the hands of *Switzerland*. Representative works were the beautiful market hall at Vevey, by Tavernay, Schobinger and Getaz, with a parabolic vault 92 feet in span; the superb new laboratories of the Zurich Polytechnic School, by O. Salvisberg; the Zurich apartment house and restaurant by H. Schneider; and the lovely villa at Basel, by O. Salvisberg. Impressive also were the Infantry Bar-

racks and the superb new Art Museum at Lucerne, both by Armin Meili.

The great 1935 event in the architecture of *Belgium* was the Exposition at Brussels. Its general plan was a judicious blend of formal and informal, preserving a straight avenue, beautifully planted and lighted, as a main axis leading to a symmetrical permanent central building, the Grand Palais, by M. Van Neek, but with free and informal balance across the avenue. The most important Belgian Exposition buildings were, besides the Grand Palais, the Pavillon du Commissariat and the Pavillon de la vie catholique, both by H. Lacoste, and the Pavillon du Gaz, by M. Verwiltge. Good foreign buildings were the Paris Building by Azéma, the Metropolitan France Building by Montarnel and Cartier, the Italian Building by Libera and Renzi, the British Building by White and Robertson, the Colonial Building (in a romantic African type of design) by Schoentjes and Douret, and the Swiss Building by H. Hofmann.

Polish architecture was almost entirely in an erratic and angular contemporary style, often based on the most extreme so-called "functionalist" lines. Precedents—German or French—could often be traced, and the modern effect sometimes gave the impression of being a modernity adopted for stylistic rather than for natural reasons. The best was represented in the Central Institute for Physical Culture, Warsaw, by E. Norwerth, the rather Parisian-looking Patria Hotel, Krynica, by K. Pniewski, the Warsaw housing by J. Szanajca, the Gdynia Navigation School by Tomaszewski, and the country houses of L. Lubinski and Helena and Symon Syrkuv.

Czechoslovak architecture, equally modern, seemed more logical, more natural and "at-home," less forced. It was among the very best purely functional design yet produced, and worthy of careful study. Especially significant were the Pension Office by Havlicek and Honzik and the Offices of the Electric Utility Companies by Bens and Kritz, both at Prague, and the Brunn Students' Building by B. Fuchs.

Hungary selected a more exuberant and a more theatrical type of modern architectural expression. It was at its best in the houses of L. Kozma (one of the greatest living house designers) or of J. Fischer or M. Farkas. The churches, such as those of Gyula (by Rimanoczy) and Bertalan (by Arkay) were manneristic, powerful, but often disturbingly complex. *Turkey*, under the influence of Kemal's modernization, was rapidly developing a flourishing school of contemporary architecture, based largely on German inspiration. Ankara, the capital, was full of buildings that were like German work of 10 years earlier; the Office of the State Monopolies, by Tahir Tug, is characteristic. *Greece* was distinguished by its school building programme. The simple circular columns and flat planes of 20th century concrete seemed especially harmonious with the Greek tradition, and excellent use of them was made in the new schools at Amadalia, Athens, and Kallitheia by P. Karantinos.

The extraordinary economic development of the Jewish portion of *Palestine* has of course produced a flood of new building at Tel Aviv; the greater part of it is excellent 20th century work. E. Menkes's Villa-Sanatorium there is a representative example. The new architectural work of *Japan* was as modern and as closely based on the "International Style" as that of Central Europe; for in Japan, as in Greece, there was some basic harmony between the old traditional forms—logical

results of early construction methods, and new forms—logical results of new construction methods.

ARCTIC EXPLORATION. See POLAR RESEARCH.

ARGENTINA. A federal republic of South America, consisting of 14 Provinces, 10 Territories, and the Federal District. Federal capital, Buenos Aires.

Area and Population. The area of Argentina is 1,079,965 square miles and the estimated population on Jan. 1, 1935, was 12,164,000 (12,030,000 on Jan. 1, 1934). Estimated populations of the chief cities (1934) were: Buenos Aires, 2,230,946; Rosario, 500,000; Córdoba, 280,000; La Plata, 200,000; Avellaneda, 160,000; Santa Fé, 135,000; Tucumán, 130,000; Bahía Blanca, 100,000; Mendoza, 80,000. Births in 1934 numbered 288,780; deaths, 134,340; marriages, 75,379; respective 1933 figures were 293,728, 133,207, and 70,337. During the period 1914-33, the urban population of towns over 2000 increased 73 per cent as against a 29 per cent increase in the rural population. The population is largely of Spanish and Italian origin. There are estimated to be less than 30,000 Indian aborigines.

Education. The voting population in 1930 had an illiteracy rate of 22 per cent, compared with 35 per cent in 1916, but in the capital only 2.6 per cent were illiterate. Primary education is free, secular, and nominally compulsory. In 1932 there were 11,545 primary schools, with 1,607,547 pupils; 232 secondary, normal and other schools, with 89,595 pupils; and 241 provincial secondary schools, with about 13,700 pupils. There are five national universities at Córdoba, Buenos Aires, La Plata, Tucumán, and Santa Fé (the latter having branches at Rosario and Corrientes), with a total of 20,000 students in 1932. In his message to Congress of May 15, 1935, President Justo announced that a committee of experts had made a survey of the educational system and submitted recommendations for the improvement of secondary and normal schools.

Production. Out of 5,018,000 gainfully employed persons in Argentina in 1933, 2,156,000 were in industry, 756,000 in agriculture, 381,000 in stock raising, 603,000 in commerce, 151,000 in transportation, and 971,000 in other professions. In 1934 there were about 197,688,000 acres of agricultural land, 269,349,000 acres of pasture, and 123,555,000 acres of woodland and forests. The estimated production of the chief crops in 1934-35, with 1933-34 figures in parentheses, was (in metric tons): Wheat, 6,486,000 (7,787,000); barley, 886,000 (784,000); rye, 401,000 (237,000); oats, 970,000 (833,000); cane sugar, 341,000 (315,700); linseed, 1,958,000 (1,590,000); cotton, 45,000 (43,400). The 1934-35 tobacco crop was 51,490,016 lb. (18,903,360 lb. in 1933-34). Corn production in 1933-34 was 5,901,000 metric tons; potatoes, 919,300 tons; wine, 200,150,000 gal (U. S.). Yerba maté, or Paraguayan tea, and quebracho extract, are other important products.

Argentina is one of the world's leading stock raising countries, the 1930 census showing 32,211,855 cattle, 9,858,111 horses, 44,413,221 sheep, and 3,768,738 swine. The 1934 wool clip was about 171,600 metric tons. Animals slaughtered in 1934 for the chilling, curing, and packing industries and in municipal and private slaughter houses included 6,002,000 cattle, 6,425,000 sheep, and 1,383,000 swine. The refrigeration and packing of meat for foreign markets is the principal industry; flour milling ranks second in importance. The production of textiles is increasing. Petroleum production in 1934 was 1,999,000 metric tons (1,951,000 in 1933). In 1933

there were 783 electrical distributing plants, which produced energy totaling 1,673,133,015 kw-hr.

Foreign Trade. Imports increased in value to 1,109,932,444 paper pesos in 1934 from 897,148,929 paper pesos in 1933, while exports totaled 1,438,028,969 pesos (1,120,841,512 in 1933). The favorable trade balance was 328,096,525 paper pesos, against a favorable balance of 223,692,583 paper pesos in 1933. On a tonnage basis, the 1934 imports were 6.2 per cent higher and the exports 10.7 per cent higher than in the previous year. The United Kingdom supplied 22.5 per cent of the 1934 imports (21.4 per cent in 1933); United States, 14.8 per cent (12.7); Germany, 9.7 (10.8); Italy, 6.2 (9.0). Of the 1934 exports the United Kingdom took 34.8 per cent (36.8 per cent in 1933); the Netherlands, 9.4 per cent (9.6); Belgium, 8.8 (10.2); Germany, 8.1 (7.7); France, 5.1 (6.4); United States, 5.1 (7.8).

Leading imports, by major classifications, in 1934 were (in 1000 paper pesos): Textiles and textile products, 275,668; fuel and lubricants, 161,708; iron and steel and their manufactures, 102,799; food products, 81,051; chemicals and drugs, etc., 72,112. Exports of agricultural products in 1934 were valued at 893,580,000 paper pesos (chiefly cereals and linseed), livestock products, 464,007,000 pesos (meat, 200,688,000; wool, 119,058,000; hides, 82,009,000); forest products, 42,432,000 pesos.

In 1935 general imports, excluding gold, totaled 1,175,000,000 paper pesos and exports 1,542,373,000 paper pesos.

Finance. The President's message of May 15, 1935, placed gross public revenues for 1934 at 903,300,000 paper pesos, including loans of 163,800,000 pesos, and the deficit, excluding loans, at about 1,000,000 pesos. The deficit for 1933 was 17,238,000 pesos, excluding loans, according to a report of the General Accounting Office. The accompanying table from the *Statistical Year-Book* of the League of Nations for 1934-35 shows the Argentine federal accounts for the years 1932 to 1935 on a different basis, with credit operations included. In October, 1935, Congress extended the 1935 budget through 1936.

ARGENTINE BUDGET OPERATIONS

[In millions of pesos]

Year	Receipts (incl. loans)	Expendi- tures	Deficit	Debt redemption (incl. in expendi- tures)
1932 ^a	807.6	935.8	128.2	94.7
1933 ^b	754.6	885.5	130.9	102.9
1934 ^b	809.0	980.0	171.0	.
1935 ^c	758.3	905.3	147.0	.

^a Closed accounts. ^b Closed accounts, provisional results. ^c Estimates.

Final budget returns for 1935 showed revenues of 1,246,066,531 pesos and expenditures of 1,254,544,000 pesos.

The Corporation of Bondholders placed the federal debt as of June 30, 1934, at 4,021,609,837 paper pesos. President Justo, in his message of May 15, 1935, stated that the debt as of Dec. 31, 1934, totaled 3,640,000,000 paper pesos. He announced a reduction in the unconsolidated debt from 1,208,000,000 pesos at the end of 1931 to 817,000,000 pesos on Dec. 31, 1934. The Argentine peso was equivalent at par to \$0.9648 in U. S. gold dollars and the paper peso was stabilized until late in 1933 at 44 per cent of the gold peso. On Jan. 19, 1934, the peso was linked to the pound sterling at the rate of 15 pesos to the pound, the rate for other currencies being calculated in accordance with their ratio to sterling. The gold standard was abandoned Dec. 16, 1929.

Communications. Argentina in 1934 had 24,675

miles of railway in operation, of which 5570 miles were state owned. In 1933 the railways carried 140,070,000 passengers and 38,500,000 tons of freight. Work on a railway line from Salta to Antofagasta, Chile, was begun in 1935. At the end of 1932 there were 6733 miles of good motor roads and 133,861 miles of unsurfaced highways. During 1933 and 1934, under the National Highway Law, 1427 miles of additional road were built (paved, 133 miles; improved earth, 108 miles; earth surfaced, 1186 miles). An additional 4252 miles were approved or under construction. Mail and passenger air lines link Buenos Aires with the chief Argentine cities and with the capitals of the Western Hemisphere. Construction of a \$3,283,000 airport in Buenos Aires was authorized in 1935. The net tonnage of vessels in the overseas trade entering Argentine ports in 1934 with cargo and in ballast was 10,295,000 (9,710,000 in 1933) and the tonnage cleared was 9,537,000 (9,673,000 in 1933).

Government. The Constitution of 1853 vests executive power in a president chosen for a six-year term by 376 electors representing the Provinces and the Federal District. The National Congress comprises a Senate of 30 members elected for nine years by the provincial legislatures and a Chamber of Deputies of 158 members elected for four years by universal male suffrage. The governors of the Provinces, elected by local suffrage, exercise extensive powers independently of the Federal Government. President in 1935, Gen. Augustin P. Justo, inaugurated Feb. 20, 1932. Vice President and President of the Senate, Dr. Julio A. Roca.

HISTORY

Economic Developments. The Justo Government successfully continued during 1935 the nationalistic recovery programme launched in the middle of 1933, and the end of the year found Argentina well on the road to economic prosperity. The recovery programme had four major objectives—restoration of a favorable trade balance, the opening up of new export markets, elimination of the unfavorable exchange situation, and encouragement of domestic manufacturing. The key agency in the operation of this plan was the Exchange Control Committee. With control of all foreign exchange transactions as a weapon, the government negotiated a series of bilateral trade agreements in which, in the main, foreign countries were obliged to buy as much from Argentina as Argentina bought from them. Imports from countries which declined to sign such agreements were in general restricted to the value of the exports they purchased from Argentina by curtailment of the amount of exchange made available for such imports. The government also succeeded in developing local industries to supply many articles formerly purchased abroad. Substantial expansion took place in the Argentine textile, glass, cement, furniture, shoe, paper, rubber, and moving picture industries.

In addition to these basic efforts, the government intervened in the economic field in many directions to cushion the effects of the world depression. The far-reaching legislation passed with this end in view in 1934 (see *NEW INTERNATIONAL YEAR BOOK*, 1934, p. 51-52) was supplemented in 1935 by other important measures. An important reform of the banking and currency system was carried out in March, 1935, through six decrees. A Central Bank and an institution for liquidating frozen bank credits were established, a new banking law promulgated, and modifications made in the organic laws of the Bank of the Argentine Nation and the National

Mortgage Bank. In general these measures were in line with recommendations made by Sir Otto Niemeyer of the Bank of England in 1932. A committee of four members, headed by the Minister of Finance, was appointed to put the financial programme into effect.

Simultaneously with the opening of the Central Bank early in June, the gold in the Conversion Office of the national treasury was revalued at 25 paper pesos per gold pound sterling (42,512.34 paper pesos per standard gold bar of 12.441 kilos). By this operation the 246,842,668 gold pesos in the Conversion Office, equivalent at par to 561,006,035 paper pesos, became equivalent to 1,224,417,646 paper pesos, thus giving the Government a profit of 663,411,611 paper pesos. An additional profit of 37,649,156 paper pesos was taken on the gold reserve against nickel and copper coins. The total profit of 701,060,767 paper pesos was used as follows: Transferred to Mobilizing Institute to permit it to pay banks for frozen assets taken over, 380,000,000; Government's subscription to Central Bank, 10,000,000; capital for Mobilizing Institute, 10,000,000, amortization of Government's debt to the Banco de la Nación, 150,000,000; payment of Treasury bills discounted by private banks, 139,471,822; deposit in the Central Bank, 11,588,945. Following the revaluation of the peso, money rates became easier, security prices rose slightly, and the exchange value of the peso increased as against other currencies. A decree modifying the Banking Act in important particulars was issued Aug. 12, 1935.

A Wine Regulating Board, empowered to restrict wine output to the normal requirements of the population, was appointed by the President, together with an advisory committee representing the banks, provincial governments, and organizations interested in the wine industry. The Board began operations with a fund of 30,000,000 pesos at its disposal. A National Cotton Board, to regulate the cultural, technical, and commercial phases of cotton production and manufacture, was likewise appointed in April. The cotton acreage in Northern Argentina had shown a 40 per cent increase in 1933-34 over the previous year. In his message to Congress of May 15, 1935, President Justo announced that a chain of grain elevators would be constructed with profits from exchange control operations. The sum of 110,000,000 pesos was allotted to continue the highway construction programme. The Federal Government continued during 1935 to meet interest and sinking fund payments on outstanding dollar bonds, but dollar bonds amounting to \$92,055,400 issued by the Provinces, Departments, and municipalities were in default as of Jan. 1, 1935.

Political Affairs. The struggle between the conservative government headed by President Justo, representing a powerful minority of large landowners, army officers, and business men, and the opposition Radical and Socialist parties reached the most violent stage since 1895 during 1935. By open force and fraud the government strove to prevent the Radicals from voting their majorities and thus regaining the power lost in the conservative revolution of 1930. Although it displayed marked Fascist tendencies, the government was attacked from the Right by the increasingly vociferous Fascist organizations, who formed a united front against both the government and the Left organizations in October. In a manifesto issued October 31 under the signature of Raimundo R. Meabe, a former member of the Uriburu revolutionary régime, the Fascists demanded the abolition of all political parties and the establishment of a corporative state. The Justo

Government thus occupied middle ground between the progressive and radical elements on one hand and the Fascists on the other. While ostensibly antagonistic to both groups, it was obviously more sympathetic to fascism than to the radicals, whose programme called for the abolition of the privileged position occupied by the landowning aristocracy.

Provincial elections during the year, commencing with that in Entre Rios in March, resulted in resounding Radical or Socialist victories wherever the voting was free from governmental manipulation. Accordingly the government resorted increasingly to the practice of replacing Opposition provincial authorities with Federal "interventors," or appointive governors with dictatorial powers, who usually saw to it that the government candidates won all elections. In Buenos Aires Province, where the overwhelming Radical electoral victory of 1931 was declared void by Provisional President Uriburu, the dictatorial tendencies of the Federal interventor provoked an uprising early in February, 1935. The Federal Government immediately suppressed the revolt and reinstated the interventor, Martínez de Hoz. The latter, however, in defiance of both President Justo and of the party which elected him, installed a Fascist cabinet and undertook to rule by frankly Fascist methods. With the approval of President Justo, he was impeached and ousted, Col. R. Marquez being appointed interventor in his place.

President Justo referred to the Fascist and radical menace in his message of May 15 to Congress. He urged legislation to purge the political parties of evils which he said caused the people "to lose faith in their leaders and, consequently, in our governing institutions." But with the approach of the national elections, scheduled for November, in which half of Congress was to be renewed, the President's supporters resorted to ever more violent methods to prevent the free expression of the popular will. This was in spite of the fact that the Radicals, who had boycotted the polls since the nullification of the election of 1931 in Buenos Aires Province, had been induced to participate in future electoral contests by the President's promise of fair elections.

An opening gun of the Opposition campaign was the charge that the Justo Government favored foreign meat packing companies in Argentina, and indirectly the landowners, at the expense of other producers and consumers. This charge, made in the Senate on July 23 by Sen. Lisandro de la Torre, leader of the opposition Socialist-Progressive coalition, was leveled specifically against Minister of Agriculture Duhau and Minister of Finance Pinedo. The bitter feeling aroused ended in a shooting affray in the Senate in which Sen. Enzo Bordabehere, an Opposition leader from Santa Fé Province, was killed and Minister Duhau and Deputy R. Mancini were wounded.

Another political storm was aroused by the government's decree of July 13 placing newspaper correspondents and news agencies in Argentina under heavy cash bonds and establishing a censorship of all outgoing news. The decree, declared unconstitutional by the Attorney General on August 20, was vigorously criticized by the Argentine press. It also stirred new radical fears of fascism, manifested by a great mass meeting of the Leftist parties in Buenos Aires in August to consolidate their united front against dictatorship.

In September, the government forced through Congress against strenuous opposition protests, a bill postponing until the second Sunday in March,

1936, the national elections scheduled for November. At the same time the electoral law was modified so as to favor government candidates. On October 3 President Justo ousted the opposition government in control of Santa Fé Province and appointed Manuel A. Alvarado, his Minister of Public Works, as interventor. Federal troops and gunboats were sent to the province to prevent a threatened popular revolt. The provincial elections held in Buenos Aires and Córdoba on November 3 were marked by even more flagrant fraud and violence. The *New York Times* reported that in many districts government police and armed civilians ousted Opposition poll watchers and prevented Opposition voters from approaching the polling booths. The Argentine press in general denounced the government's conduct of the elections, declaring that the ruling oligarchy had never before resorted to such flagrant frauds. Despite these methods, Opposition groups elected the mayor of the city of Córdoba and won many of the Buenos Aires election districts. These elections, marked by numerous shootings in which several persons were killed and many injured, were followed by a new outbreak in Córdoba Province on November 17, when eight policemen and a radical leader were killed during elections in the town of Plaza de Mercedes.

Strong criticism of the government's repressive policy continued in the Argentine press to the end of the year. On December 30 President Justo reorganized his cabinet in a form indicating his desire to conciliate the Radical party. He accepted the resignations of Federico Pinedo, Minister of Finance, Luis Duhau, Minister of Agriculture, and Manuel De Iriondo, Minister of Justice and Public Instruction, appointing in their respective places Roberto M. Ortiz, Miguel Angel Carcano, and Ramon S. Castillo.

Foreign Relations. Foreign Minister Saavedra Lamas of Argentina reaped the major share of the prestige accruing to the peace bloc, consisting of Argentina, Brazil, Chile, Peru, Uruguay, and the United States, for their successful negotiation of the truce of June 12, 1935, between Bolivia and Paraguay (see BOLIVIA under *History*). The holding of the peace conference in Buenos Aires was another triumph for the Argentine Government in its rivalry with Brazil and Chile for the political and economic leadership of the continent. An unusually violent demonstration of the mutual jealousy between Argentina and Chile occurred during March. Charges in the Chilean press that Argentina was responsible for continuance of the Chaco War were followed by a statement by President Alessandri of Chile, attributing the failure of the peace efforts to lack of cooperation between the Chilean and Argentinian Foreign Offices. Although the Chilean Government had shortly before announced an exchange of visits between Presidents Justo and Alessandri, the latter now declared that the time was not opportune for the Argentine President's proposed visit to Santiago. About the same time Augustin Edwards, former Chilean Ambassador to Great Britain, openly accused Saavedra Lamas of promoting Argentina's leadership in South American affairs at the expense of the continent's peace and harmony.

These hostile criticisms, which apparently were caused mainly by Argentine opposition to a new Chilean-Peruvian trade agreement, brought the two governments near to the severance of diplomatic relations. The incident was dropped, however, and Argentina and Chile soon afterward commenced joint negotiations with Bolivia and Paraguay,

which, with the support of the other American governments, brought the Chaco War to a close. The friendly relations between Argentina and the United States, restored through the diplomacy of Secretary of State Hull at the Seventh Pan American Conference in 1933, continued undisturbed during 1935. In opening the Pan American Commercial Conference at Buenos Aires on May 26, Foreign Minister Saavedra Lamas seized the occasion to eulogize President Roosevelt, Secretary Hull, and their "good-neighbor" policy. Political and commercial relations between Argentina and Brazil were further cemented by the state visit of President Vargas to Buenos Aires in May and June, returning the visit made to Rio de Janeiro by President Justo in 1933. A number of conventions were signed with Brazil, Chile, and Peru during the year.

Irked by the conclusion of the Peruvian-Chilean reciprocal trade treaty, which gave Chile an advantage over Argentina in the Peruvian wheat market, the Argentine Government on December 5 slapped an additional 50 per cent tariff duty on imports of petroleum from Peru. This action aroused new criticisms in Chile of Argentine "imperialism."

The notorious tardiness of the Argentine Congress in ratifying treaties negotiated by the government was partly responsible for further incidents along the Bolivian-Argentinian boundary. These events increased the mutual hostility of the two nations caused by veiled Argentine support of Paraguay in the Chaco War. A boundary treaty, signed in 1925, had been ratified by Bolivia and by the Argentine Senate but remained ineffective for lack of action by the Argentine Chamber of Deputies. This left in doubt the status of a stretch of frontier region in Jujuy Province and a considerable infiltration of Bolivians took place in territory claimed by both countries. Early in the year a Bolivian recruiting squad shot an Argentine citizen in this disputed region, provoking a vigorous Argentine protest. On September 19 the Argentine Senate held a secret session to consider charges that Bolivian authorities were administering some 2700 square miles of territory claimed by Argentina.

On October 21 the Argentine Government declared its adherence to the statute establishing the Permanent Court of International Justice, subject to Congressional approval. Despite the large Italian population in the country, which organized a boycott against British business in connection with the Italo-Ethiopian controversy, the Argentine Government complied with its obligations under the League Covenant by joining in the application of economic sanctions against Italy.

ARIZONA. Population. On Apr. 1, 1930 (Fifteenth Census), 435,573; July 1, 1934, by latest Federal estimate, 457,000; 1920 (Census), 334,162. Phoenix, the capital, had (1930) 48,118 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1935	156,000	125,000 ^a	\$7,762,000
	1934	136,000	117,000 ^a	8,159,000
Hay (tame)	1935	148,000	402,000 ^b	3,417,000
	1934	147,000	354,000 ^b	4,602,000
Wheat	1935	38,000	836,000	686,000
	1934	50,000	1,000,000	820,000
Corn	1935	40,000	720,000	612,000
	1934	35,000	490,000	519,000

^a Bales. ^b Tons

Mineral Production. The yearly yield of the mines of copper, gold, silver, lead, and zinc rose greatly in total value to \$36,269,000 for 1935, from

\$23,292,150 for 1934. As three-fifths of the recoverable gold mined in 1935 in Arizona and some two-thirds of the silver lay in ores mined principally for copper, the improvement in yield was shared by the three metals. The yields of lead and zinc, while much higher for 1935 than for 1934, accounted between them for less than \$1,000,000 of the year's total value in all five metals.

The mines' production of copper rose to some 270,500,000 lb. (1935), from 178,082,213 (1934); by value, to \$22,722,000, from \$14,246,577. The partial reopening of the United Verde mine in 1935 (it had closed in 1931) had much to do with the increase. The production of gold attained some 226,500 fine ounces (1935) as against 167,000 (1934); the value of the gold produced in 1935, at \$35 an ounce, was \$7,927,500. The yearly quantity of silver that was produced rose to 6,375,000 ounces (1935), from 4,448,474 (1934); the total by value, to \$4,704,750 (1935), from \$2,875,781 (1934).

Education. The Legislature restored in 1935 \$5 per capita of that part which had been cut, in the years of depression, from the State money apportioned to schools; some of the educational features that had been dropped by schools were revived. In common with many States, Arizona was active in developing alterations in the curriculum.

Charities and Corrections. Under the system of State administration in force in 1935 a Board of Directors of State Institutions exercised control over such of these institutions as had the care or custody of persons. Each institution had its superintendent, who was under the Board's authority. The Board had the Governor as its president and the State Treasurer as a member, both *ex officio*; an appointed secretary (in 1935, A. N. Kelley) completed its membership, acting as executive officer and institutional purchasing agent.

In 1935, having given up the committing of delinquent girls to the State School for Girls, the Board delivered such girls to the care either of the Florence Crittenton Home or of the Convent of the Good Shepherd in Phoenix. The institutions maintained by the State were: the State Prison, at Florence; State Hospital for the Insane, at Phoenix; Pioneers' Home, Prescott; State Industrial School, Fort Grant. The Board maintained a State reemployment office coöperating with the Federal Government.

Legislation. The State Senate adopted a memorial asking that the Federal Congress authorize an investigation into religious persecution alleged to be practised in Mexico. The legislature created a position of State's envoy, or agent, at Washington; the post was to carry a salary of \$7500 a year; its duties included the representation of the State government in the increasingly important relations with the Federal administrative agencies. The rate of the tax on retail sales was increased.

Political and Other Events. Governor Moeur's course (in 1934) of halting the construction of the proposed Federal Parker Dam in the lower Colorado River by use of a river boat and a detachment of the National Guard of the State to prevent access to the site on the State's bank of the river was supported by a decision of the Federal Supreme Court, rendered April 27. The construction of the Parker Dam, down stream from Boulder Dam about halfway to Yuma, was regarded as needful to the plan for the aqueduct to the Californian coast and also to the supply of water for the Imperial Valley. Arizona therefore felt its position in the contest for more water from the Colorado River to have been strengthened by the Supreme

Court's decision. The State authorities were reported in September to intend demanding 7,500,000 acre-feet a year of the water from the Boulder Dam, instead of the previously demanded 2,800,000.

The reorganization of the Maricopa County Municipal Water Conservation District No. 1, in default since Jan. 1, 1930, was completed in March, by aid of a loan from the RFC, the old bondholders becoming holders of debentures and income-bonds.

Officers. The chief officers of the State, serving in 1935, were: Governor, B. B. Moeur; Secretary of State, James H. Kerby; Attorney-General, John L. Sullivan; Treasurer, Mit Simms; Auditor, Ana Frohmiller; Superintendent of Public Instruction, H. E. Hendrix.

Judiciary. Supreme Court: Chief Justice, Alfred C. Lockwood; Judges, Henry D. Ross, A. G. McAlister.

ARKANSAS, UNIVERSITY OF. A coeducational State institution of higher learning in Tucson, Ariz., founded in 1885. The 1935 autumn enrollment totaled 2471; the registration for the summer session of 1935 was 469. The faculty numbered 185. The income for the year 1934-35 was \$1,083,382, the university receiving both Federal and State support. The library contained approximately 100,000 volumes. A new museum, humanities building, and women's building were under construction. President, Homer LeRoy Shantz, Ph.D., Sc.D.

ARKANSAS. Population. On Apr. 1, 1930 (Fifteenth Census), 1,845,482; July 1, 1934, by latest Federal estimate, 1,876,000; 1920 (Census), 1,752,204. Little Rock, the capital, had (1930) 81,679 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu	Value
Cotton	1935	2,140,000	890,000 ^a	\$50,062,000
	1934	2,162,000	867,000 ^a	53,031,000
Corn	1935	2,000,000	26,000,000	19,500,000
	1934	2,053,000	15,398,000	14,782,000
Hay (tame) ...	1935	598,000	580,000 ^b	6,496,000
	1934	610,000	507,000 ^b	7,301,000
Rice	1935	138,000	6,348,000	4,126,000
	1934	136,000	6,936,000	5,688,000
Potatoes . . .	1935	44,000	3,476,000	2,607,000
	1934	41,000	2,624,000	1,469,000
Sweet potatoes .	1935	28,000	1,820,000	1,274,000
	1934	27,000	1,620,000	1,442,000
Oats	1935	132,000	2,244,000	1,010,000
	1934	132,000	2,046,000	1,289,000

^a Bales ^b Tons.

Mineral Production. A new field of petroleum was discovered late in 1934. This area, called the Rainbow field, was found in Union County. Its development did not proceed far enough to have any great effect on the year's production of petroleum, which again declined, to 11,139,000 barrels for 1934, as against 11,686,000 for 1933.

More than nine-tenths of the United States' production of bauxite for 1934 came from Arkansas. The year's total for the State was 145,674 long tons, in value \$1,129,053. Arkansas was reported as becoming in 1934 a substantial though as yet a minor producer of mercury, to the quantity of 488 76-pound flasks. The output was from an area on both sides of the Little Missouri River in Pike County, discovered in 1931 to contain cinnabar and prospected in 1932. The area had not yet been thoroughly developed at the end of 1934.

Education. The inhabitants of school age, as reckoned for the academic year 1934-35, numbered 646,881. The enrollments of pupils in the public schools totaled 465,211, somewhat surpassing the total for the year before. Of the enrolled pupils,

407,204 were in common schools or elementary grades, and 58,007 were in high schools. The year's expenditures for public-school education throughout the State were estimated at \$10,500,000. This figure did not differ greatly from the total for the year before. The earlier year's average of teachers' salaries, \$489, was judged to have held with little alteration for the year 1934-35.

Legislation. The State's law prohibiting traffic in liquor was repealed. In its place the Legislature set up a system to limit and control sales, authorizing sale by the package by holders of licenses obtainable after payment of a fee expected to raise the State's revenue materially. Option, however, was allowed to counties, whether to exclude liquor. The new liquor law went into effect immediately.

A tax of 2 per cent on merchants' sales was enacted, with the intention of bringing in \$2,500,000 of yearly revenue, partly for the support of public schools. A system of pensions for the aged poor was created, with a view to enabling the State to obtain Federal contribution to such pensions. The Legislature showed a disposition to lend itself to a proposal of Secretary of Agriculture Wallace, that some State offer itself as a subject for the testing of Federal schemes to meet "the economic needs of the people," through accepting such schemes by referendum. It invited Wallace to submit his proposal to it, but he did not do this in person.

Political and Other Events. The State's sales tax, which went into effect on July 1, met with much opposition at the outset, from a group of merchants. These pledged themselves not to collect the tax from purchasers nor to pay it to the State. In the litigation over the tax, Chancellor Dodge granted, on October 30, a permanent injunction against its collection from sales of automobiles, except if the tax charge were in excess of the cost of the automobile license tag.

The State became the focus, in the spring, of disturbances attending the spread of the Southern Tenant Farmers' Union. Many Negro tenant farmers in Poinsett and Mississippi counties joined this union. Some of the landlords and their overseers exerted themselves to stop the movement. Violence cropped up, chiefly in the way of intimidation of union leaders and raids by "night riders" on Negro tenants' homes. The tenants' economic plight was bad, as the AAA had reduced their allowed acreage, along with that of other growers of cotton, whereby their credit at landlords' stores, being based on the acreages they cultivated, was automatically cut down.

Officers. The chief officers of the State, serving in 1935, were: Governor, J. M. Futrell; Secretary of State, Ed F. McDonald; Treasurer, Earl Page; Auditor, Charles Parker; Attorney-General, Carl E. Bailey; Commissioner of Education, W. E. Phipps.

Judiciary. Supreme Court: Chief Justice, C. E. Johnson; Associate Justices, Frank G. Smith, T. H. Humphreys, Thomas M. Mehaffey, Turner Butler, E. L. McHaney, Basil Baker.

ARKANSAS, UNIVERSITY OF. A coeducational State institution of higher learning in Fayetteville, Ark., founded in 1871. In the fall of 1935 the enrollment was 2104, and for the summer session it was 600. The number of faculty members was 224. The endowment amounted to \$132,000, while the income for the year was \$722,000. The library contained approximately 117,000 volumes. President, John Clinton Futrell, LL.D.

ARMAMENTS. See DISARMAMENT; MILITARY PROGRESS; NAVAL PROGRESS; FRANCE, GERMANY, GREAT BRITAIN, ITALY, JAPAN, and other countries under *History*.

ARMENIAN SOVIET SOCIALIST REPUBLIC. A republic of the Transcaucasian S.F.-S.R. of the Soviet Union. Area, 11,945 sq. miles; population (1933), 1,109,200. Chief towns: Erivan (capital), 111,500 inhabitants in 1933; Leninakan, 62,100; Nukha, 25,628; Lenkoran, 15,013; Kuba, 14,374; Karaklis, 11,222. In 1933 there were 202,000 students in the primary and secondary schools. Higher educational institutions numbered 9; technical schools, 64; and workers' faculties, 10.

The total area under cultivation in 1933 amounted to 1,047,280 acres of which 74,100 acres were under cotton. Fifty per cent of the farms were collectivized by Jan. 1, 1934.

ART EXHIBITIONS. Art exhibitions seemed to multiply in 1935 as sales decreased and the number of artists on relief grew larger. Countless exhibitions were held throughout the country to encourage local artists; innumerable traveling exhibitions were circulated by Art Associations; the annual exhibitions held by professional bodies at which many prizes were bestowed took place as usual, in addition to which were many very notable loan exhibitions and memorial shows held in Art Museums, dealers' galleries, and sales rooms.

That the circulating exhibition has become an important factor in the Art Museum's programme was again remarked, and also that the prevalence of loan exhibitions has put the world's greatest masterpieces "on the road." To such an extent was the exchange of such treasures carried in 1935 that the practice seemed to have become an instrument of international good will.

In Paris from May to September an exhibition of Italian Art comprising three hundred paintings from Cimabue to Tiepolo, sculpture, ivories, and laces, lent generously from great public collections by Italy and other nations, was held and very largely attended. That such an assemblage of the world's greatest masterpieces of painting will ever again be held under one roof seems improbable. In Venice a great exhibition of paintings by Titian, to which Spain made especially large contribution, was held during the summer months; while simultaneously at Parma a Correggio exhibition took place.

In London there was opened in November, 1935, to continue until March, 1936, under the auspices of the British and Chinese Governments the greatest exhibition of Chinese Art that has ever been held. To this exhibition, set forth in Burlington House, China, Japan, the United States, and European nations all made contributions. For the first time in history a battleship was used as a carrier of works of art. The British cruiser *Suffolk* brought from the Orient fifty million dollars worth of Chinese works of art for this exhibition and was accorded on arrival at Portsmouth, July 28, a royal welcome.

Museums of France including the Louvre, the Musée Versailles, the Théâtre François and private French collectors loaned their best to a "Survey of French Art" circulated in American Museums, an exhibition of "French Art of the 18th Century" held in the Metropolitan Museum and an exhibition of "Famous Women in French History" put on by the Museum of French Art in New York during 1935. To equally notable exhibitions abroad American Museums and collectors made valuable loans.

Exhibitions of foreign art, both old and modern, took conspicuous place in art events of 1935 in America. Outstanding was an exhibition of Paint-

ings by Frans Hals held in the Detroit Institute of Art in January in which about a sixth of all the works this master produced were shown as loans from American collectors. An important exhibition of Spanish Art was held in the Brooklyn Museum in October. Spanish Art and the development of art in the Southwest were emphasized by exhibitions held in connection with the California Pacific International Exposition in San Diego, California, in 1935.

Earlier in the year an exhibition of Soviet Art, consisting of 140 paintings and 250 prints, had a first showing in the Pennsylvania Museum, Philadelphia, and was later circulated, in part at least, among other museums. Arrangements for this exhibition were made through a Committee in Philadelphia of the Russian-American Institute, headed by Leopold Stokowski, the distinguished leader of the Philadelphia Orchestra, in cooperation with the Society of Cultural Relations with Foreign Countries of the U.S.S.R.

In the Museum of Modern Art, in the city of New York, two very noteworthy exhibitions were held in 1935—one of African Negro Art, sculpture in wood, bronze, and ivory, collected in Europe by Mr. James Johnson Sweeney, and set forth under his direction; the other of paintings and drawings by Van Gogh, one of the greatest of the modernists. The majority of the exhibits in the latter exhibition came from abroad and the total insurance carried was approximately one million dollars, which, in view of the fact that this painter received less than one hundred dollars by the sale of paintings during his entire lifetime, seemed to emphasize his life's tragedy. The attendance at this exhibition was very large.

A retrospective exhibition of paintings and drawings by Cecilia Beaux was held as a tribute to her genius and achievement by the American Academy of Arts and Letters in New York, opening on November 14 and continuing well into 1936. This comprised 45 paintings and 15 drawings, many of well known people, rendered with keen insight, sensitive perception, superb mastery of medium and excellent effect—a magnificent showing.

The Annual International Exhibition of Paintings held by the Carnegie Institute, Pittsburgh, in the autumn of 1935 included for the first time works by artists of South America, Mexico, and Canada, as well as heretofore, those of European countries and the United States. The first prize was awarded to a painting by a Spaniard, Hipólito Hidalgo de Caviedes, for a picture of a Negro boy and girl seated on a sofa. The second and third prizes went to American painters, Charles Burchfield and Henry E. Mattson. None of these works possessed beauty of content but they were less radical and storm provocative than those so honored the previous year.

The Biennial Exhibition of Contemporary American Paintings held in the Corcoran Gallery of Art in Washington in the spring of 1935 strikingly manifested present trends and confusion of ideals but was distinctly conservative as compared with the Annual Exhibition of current American Art set forth in the fall by the Art Institute of Chicago, which, according to the reviewers, was the worst ever held in that city. Director Harshe put the blame on the jury of selection; great dissatisfaction with the prize awards was expressed by some of the donors.

The Painting and Sculpture Section of the Procurement Division of the Treasury Department in October placed on exhibition in the Corcoran Gal-

lery of Art at Washington designs entered in competition for mural paintings in the new Post Office and Justice Buildings in Washington and other Federal Buildings throughout the United States, and models of figures in sculpture, mail carriers in historical sequence, to be placed in niches in the reception room of the Postmaster General.

An exhibition of paintings and drawings made in CCC camps under provision of the Government was first held in the National Museum in Washington and then circulated in units. One group was shown by special invitation in the White House.

Under the patronage of the Secretary of Labor exhibitions of paintings and sculpture by artists who had earned their living by manual labor were exhibited in the Labor Department. The first of these consisted of paintings by the late John Kane of Pittsburgh; later were shown paintings by Henry Bennet and George Haskell of Mount Holyoke, Mass., and sculpture in wood by Henry Geiger of Cedar Rapids, Iowa.

The Metropolitan Museum of Art, N. Y., held memorial exhibitions of paintings by Bryson Burrough, for many years curator of paintings, and of pottery by Charles F. Binns, for long one of our leading American potters.

To a notable exhibition of "The Sea and Ships," held in the Pennsylvania Museum, in November, the President of the United States, Franklin D. Roosevelt, lent several important items from his private collection.

Exhibitions of Persian Art were held in the Museums of Brooklyn and of Toledo; and, of Mexican Art in those of Cincinnati and Baltimore; of Classical Art in the Addison Gallery at Andover; of Chinese Art in Worcester; of 19th Century French Art in Kansas City, and of American Art of the 19th and 20th Centuries in San Francisco. The works of Pennsylvania furniture makers of early days were shown in the Pennsylvania Museum, and those by Connecticut furniture makers of Colonial times in Hartford. Early American portraits were featured by the Museum of Fine Arts, Boston.

An exhibition of one hundred paintings by American artists of to-day selected by Perry B. Cott, assistant curator of the Worcester Art Museum, was circulated in Museums and Art Galleries in Canada, South Africa, Australia, and New Zealand by the Carnegie Corporation of New York in 1935. To artists contributing to this exhibition a rental fee amounting to 1 per cent of the price, per month, was paid, and dealers lending received a flat fee of \$10 for each painting.

Exhibitions of Sculpture by Paulanship, and of Prints and Drawings by Percy Crosby, American artists, were shown in London in the summer of 1935—the former in the Tate Museum, the latter in the Arlington Gallery.

ARTISTS. See MUSIC.

ART MUSEUMS. The announcement made in October, 1935, that the Hon. Andrew W. Mellon had set aside \$10,000,000 for the erection of a National Gallery of Art at Washington, to which he purposed to give his own magnificent collection of paintings by the old masters, was, with its far-reaching significance, sufficient to make this year outstanding. Stipulation was made in connection with this gift that the building should not bear the donor's name but be known as "The National Gallery of Art"; that only works of outstanding merit and quality should be permanently placed therein,



Courtesy of Carnegie Institute

"LLAIRA AND TIBERIO"

By Hipolito Hidalgo de Caviedes

Awarded First Prize in the 33d Carnegie Institute International Exhibition of Paintings, Pittsburgh



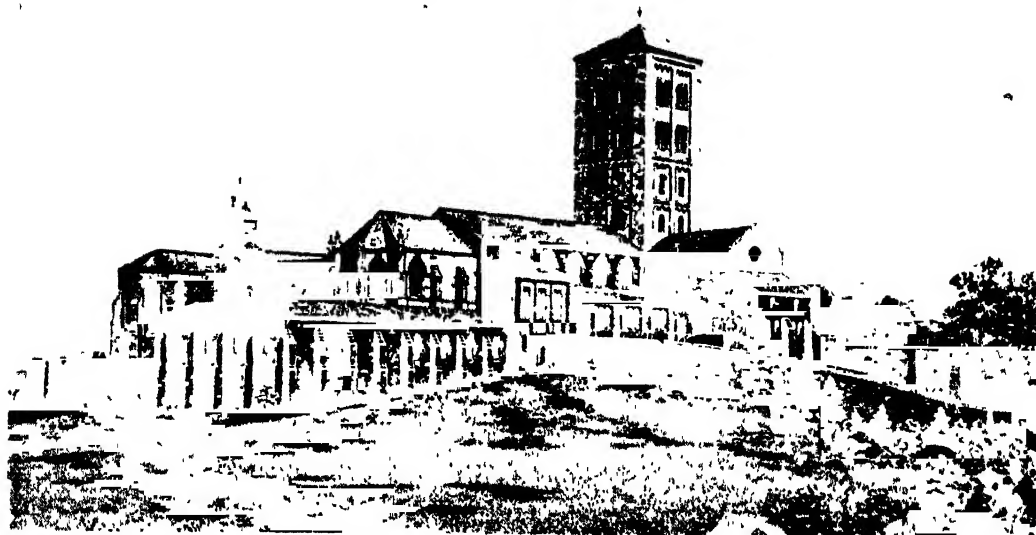
*Photograph by W. F. Roberts Company
Courtesy of The Corcoran Gallery of Art*

"REID MOORE"

By Eugene Speicher

Awarded First W. A. Clark Prize and Corcoran Gold Medal,
14th Biennial Exhibition of Contemporary American Oil Paint-
ings Corcoran Gallery of Art, Washington

ART EXHIBITIONS

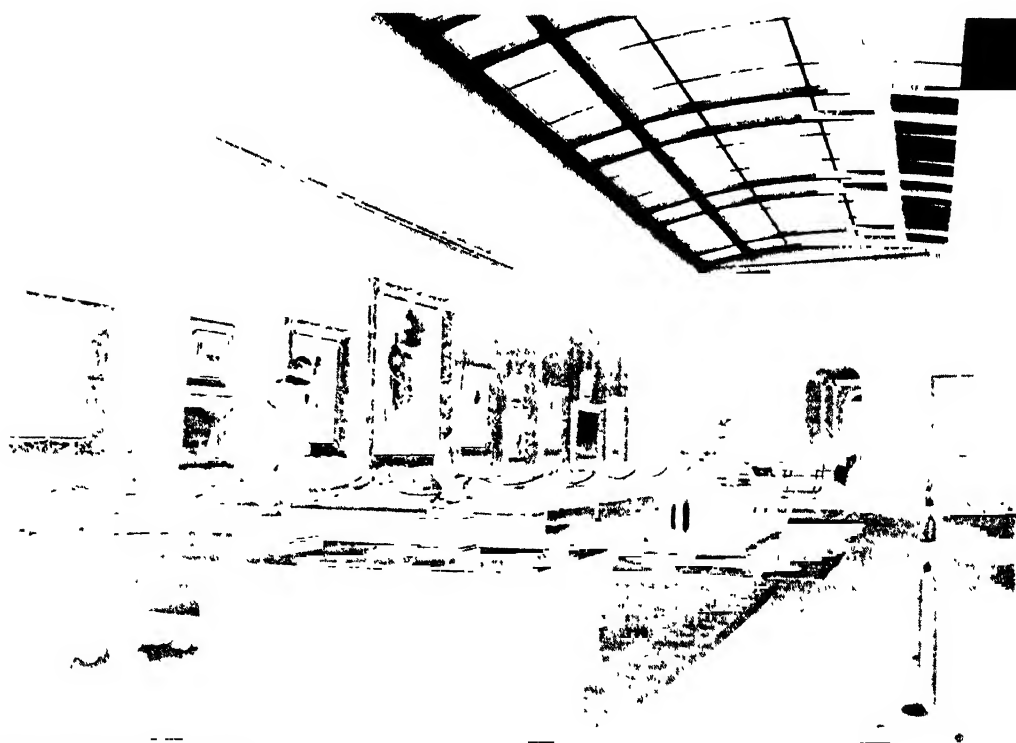


Courtesy of The Metropolitan Museum of Art

THE CLOISTERS

By Charles Collens

Architect's drawing of museum of religious art under construction in New York City



© The Frick Collection, 1935

THE FRICK MUSEUM

West Gallery

Opened in New York City, Dec. 11, 1935

ART MUSEUMS

and that the project should not be delayed beyond June 30, 1941. It was further revealed at this time that when Mr. Mellon conveyed the title to his collection, valued at over twenty million dollars, and including several world-famous paintings from the Hermitage collection, to an Educational and Charitable Trust, which he had set up, as announced in November, 1934, it was with the intention that it should form the nucleus of a great National Gallery to which it was his hope and belief that other collectors would make contributions. "The object of such a Gallery," Mr. Mellon stated, "should be the education of the people of the United States in the fine arts and the cultural advancement of mankind." His collection comprising 60 paintings of the rarest value was, he said, assembled by him during a long period of years with the idea that it would be made available to and become the property of the people of the United States.

Another munificent gift for the extension of art knowledge was that of a fund of approximately \$2,500,000 given by John D. Rockefeller Jr. to the Metropolitan Museum of Art, New York, for the erection of a building on a site donated by him in Tryon Park to take the place of the old Cloisters, purchased from George Gray Barnard, which would house most appropriately the Museum's Mediæval collections and the additions made thereto by himself over a period of years. Plans for the building, which will take the form of a Mediæval monastery, drawn by C. Collens, were exhibited at the time this announcement was made. This building will crown Washington Heights and splendidly exemplify the period for which it stands.

At the same time that this donation was made public a second and scarcely less generous gift from Mr. Rockefeller was announced by the President of the Metropolitan Museum of Art. This was a set of six French 15th century tapestries, "The Hunt of the Unicorn," formerly hung in the Château of Verteuil, the seat of the La Rochefoucauld family, and purchased by the donor 13 years ago for \$1,100,000. They will hang in the new Cloisters. Then in the late autumn of 1935 announcement was made that Mr. Rockefeller had purchased, for installation in the Cloisters, the chapter room of the Abbey of Pontaut—a very splendid acquisition.

In 1925 the Metropolitan Museum of Art became heir to Frank A. Munsey's entire estate; it was not, however, until January, 1935, that the beneficiary was able to announce the full amount of this beneficence. It was \$10,000,000, the greatest single benefaction received by the museum since its founding. The income from this fund, it was stated, made it possible for the museum to go through the years of depression without curtailment of activities.

Art Museums have profited indirectly but very materially by the Federal Government's relief measures and appropriations under which labor, and in some instances skilled service, became available without cost. Through substantial government aid of this sort, buildings for a State Art Museum in Richmond, Virginia, and for Art Museums at the University of Virginia, Charlottesville, the University of North Carolina and at Charlotte, North Carolina, were erected and practically brought to completion in 1935. The Museum at the University of Virginia, designed by E. S. Campbell, head of the Department of Architecture, colonial-classic in style, was opened in June. The State Museum at Richmond, a Georgian building of limestone and brick, to which the late Judge John Bar-

ton Payne left his art collection, \$100,000 for erection and \$50,000 as an endowment fund, was opened unceremoniously in October. An art museum, built in part through Federal Government aid, was opened in Wichita, Kansas, in September, 1935. Designed by Clarence Stein in the Spanish-Aztec-Indian style, this building is of cast concrete.

The Minneapolis Art Institute, in March, on the death of its president, John R. Van Derlip, and by his bequest, received a most valuable collection of rare and early European paintings, sculpture, and other works of art, besides, as his residuary legatee, a substantial sum for further acquisitions through purchase. These gifts were in memory of the donor's wife—Ethel Morrison Van Derlip. The collection was exhibited in the Institute in May.

The Brooklyn Museum made extensive physical changes and improvements in 1935, removing the monumental flight of steps leading from the street to its main entrance, creating new entrances on the ground floor, and (dispensing with its auditorium) a handsome entrance hall and a series of new galleries. The opening of these new galleries was inaugurated by a loan exhibition of Spanish Art.

On Jan. 18, 1935, the new San Francisco Museum of Art was formally opened. This museum with its 14 well lighted galleries is located on the fourth floor of the War Memorial building in the Civic Center adjacent to the Public Library and Opera House. It has no connection with the two San Francisco art institutions previously established—the M. H. de Young Gallery and the California Palace of the Legion of Honor.

On May 1 the Gallery of French Art in New York took possession of new quarters on the seventh floor of the Maison Française, Rockefeller Center, New York. These accommodations include not only a series of galleries but a roof garden terrace.

The Frick Art Reference Library, begun in 1920 by Miss Helen Frick, and now comprising 200,000 reference photographs, 45,000 books, and 18,000 sales catalogues, took possession, in January, 1935, of its own new building—a Renaissance structure erected, at a cost of \$850,000, from plans by John Russell Pope, architect.

The opening of the Frick Collection, housed in the Frick mansion in New York City, on Dec. 16, 1935, was one of the great events in art during 1935. It is one of the finest collections in the world assembled by a private collector, comparing with the Wallace Collection, London, and others equally famous.

John Russell Pope was also the architect selected by Lord Duveen to design the addition to the Tate Gallery of London given by him to the British Nation in 1935.

The Museum of Modern Art in New York received in May, 1935, a grant from the Rockefeller Foundation for the establishment of a department of motion pictures to be known as the "Museum of Modern Art Film Library." This institution immediately thereafter undertook to make as complete a record as possible of noteworthy moving pictures produced in this country and abroad from 1889 on, programmes of which it will circulate to art museums, associations, schools, colleges, and study groups, after the same manner as exhibitions.

The Art Museum at Worcester, Mass., was given by the Carnegie Corporation of New York, an additional grant of \$15,000 for the continuation of its Regional Art Education programme, initiated in 1932, under a grant of \$10,000 a year for three years from the same organization.

Almost all of the Art Museums increased their educational programmes in 1935 to meet the need for leisure-time occupation of the unemployed or part-time workers. Early in the year the Whitney Museum in New York inaugurated Wednesday evening openings. The Carnegie Institute, Pittsburgh, and the new San Francisco Museum were open every night; Cleveland Museum, three nights; Detroit Art Institute and John Herron Art Institute, Indianapolis, two nights, and Toledo Museum, Worcester Museum and Albright Gallery, Buffalo, each one night a week.

Childe Hassam, distinguished painter and etcher, who died in August, 1935, left by his will all the paintings, drawings, and prints in his studio to The American Academy of Arts and Letters to be sold to establish a fund for the purchase of paintings and prints, by artists of the United States and Canada, to be given to Art Museums in the United States and Canada.

In November, 1935, a collection of over five hundred prints by contemporary artists, chiefly of America, was given by the Chicago Society of Etchers to the Division of Graphic Arts, U.S. National Museum.

Two hundred and seventy-four etchings by George Elbert Burr of Arizona were given by an anonymous donor to the New York Public Library.

Mrs. John D. Rockefeller gave collections of paintings by modern artists to the Museum of Modern Art and Dartmouth College.

Through the bequest of Frank Brewer the Museum of Fine Arts, Boston, received 92 pieces of British silver. The Art Institute of Chicago and the Remington Museum, Ogdensburg, N. Y., each received 40 paintings through the bequest of Frederick T. Haskell. Fifty Renaissance paintings were given to Princeton University by an alumnus, Henry W. Cannon, Jr., in memory of his father.

Despite the paring down of administrative funds there were notable purchases made by Museums in 1935 for permanent collections, presumably from endowments for such purposes. Among the most important were the following:—"Portrait of the Poet Gongora" by Velasquez, "Portrait of Sir William Butts" by Holbein, "Portrait 16th Century French School" by the Museum of Fine Arts, Boston; "Lucretia" by Rembrandt, and "Triptych" by Daddi by Art Institute, Minneapolis; "Judith with Head of Holofernes" by Titian, and Portrait (probably Taddeo Gaddi) by Raphael by Art Institute, Detroit; "Madonna and Child" by Memling, Cleveland Art Museum; "Annunciation" by Giovanni del Biondo, Portrait bust—in plaster—of Mlle. Antoinette Schulte by Despiau, Albright Gallery, Buffalo; "Portrait of Girl" by Dubordieu, Chicago Art Institute; "Maisons a Anvers" by Van Gogh, "Peasant Woman Resting" by Pissarro, by Toledo Museum; "La Songeuse" by Renoir, two Gothic sculptures and Gothic glass window by City Art Museum, St. Louis; four miniatures from the Morgan sale, "Charles de Cosse" by Clouet, "Portrait of a Lady" by Hilliard, "Portrait of a Nobleman" by Isaac Oliver, and "Sir John Maynard" by John Hoskins, by the Metropolitan Museum of Art.

ART SALES. The sale in Christie's auction rooms, London, on June 24-27, of the John Pierpont Morgan collection of miniatures was not only the most notable sale of the year 1935 but of many years. Visitors swarmed the show rooms for days before the sale which was attended by representatives of Art Museums and private collectors from all parts of the world. This sale was successful

even beyond anticipation. The first session, June 24, was especially exciting for then the "Armada Jewel" and the portrait of Mrs. Pemberton by Holbein, two most famous items, came up. The former was purchased by Lord Wakefield for \$14,000, and later presented by him to the British Nation. The latter was secured by Lord Duveen for the record price of \$30,306, the highest figure of the sale, and more than double the price it brought in 1904. A few days later Lord Duveen turned it over to England for the price he paid, the purchasers being Lord Bearsted and the National Collections' Fund. Both of these treasures were deposited in the Victoria and Albert Museum. A portrait of Thomas More by Holbein, which, like the portrait of Mrs. Pemberton, was painted in gouache on a playing card, sold for \$4410. Other interesting items were "Portrait of Nobleman" by Isaac Oliver which sold for \$3215; "Portrait of Charles de Cosse" by Clouet for \$2700; "Portrait of the Duke of Monmouth" by Cooper, bought 20 years before for £70, sold for £735; "Portrait of Lady Hunsden" by Hilliard, bought at 55 guineas, sold for £252. "Henry VIII" by Holbein, sold in 1905 for 95 guineas, here fetched £525. Fifty-six portraits by Richard Cosway brought \$33,389 and 21 by Engelhart about \$1000. John Smart's miniature of Sir Charles Oakeley brought \$3008 and that of Lady Oakeley \$2800. The total for the four days' sale was \$340,651.

Earlier in the year, also with the desire to liquidate some of his assets, Mr. Morgan sold, through M. Knoedler & Co., at private sale, six oil paintings from his collection, receiving therefor \$1,500,000. These were a pair of portraits by Frans Hals, works by Fra Filippo Lippi, Ghirlandaio, Rubens, and Lawrence. The Rubens—a portrait of Anne of Austria—and the Fra Filippo Lippi triptych were purchased by the Metropolitan Museum of Art.

Several noted paintings in American collections were purchased by overseas collectors. Among these were Carpaccio's "St. Eustace" formerly in the Otto H. Kahn collection, and a Fra Angelico owned by Mr. Morgan, both of which were acquired by Baron H. Thyssen of Switzerland, and a series of panels, setting forth the St. Francis legend, by Sassetto, from the collection of Clarence Mackay, purchased by the National Gallery, London.

The Bles collection of English glass brought a total of \$20,000 when sold in London during the 1935 season. One item—a Royal Oak goblet—fetched approximately \$2850.

In Paris, in May, at the sale of the Seligmann collection a painting by Hals—"Les Petits Chanteurs"—brought \$40,000. In Leipzig a fine impression of Rembrandt's etching "Landscape with Three Trees" was sold for \$5000. The National Gallery at Melbourne, Australia, was reported to have paid over \$120,000 for two paintings by Velasquez.

Prices in this country were not as high as abroad. In June, reviewing the season then closing, the American-Anderson Galleries, New York, reported as significant the following sales:—"Singing Boys" by Hals and "Portrait of Lady Lister" by Gilbert Stuart, \$20,000 each; "Portrait of Sir Robert Liston" by Gilbert Stuart, \$10,500, "Le Cavalier dans la Campagne" by Corot, \$13,000. However, the total receipts, from the 68 sales for the season 1934-35, amounted to nearly three million dollars. This included art objects and some rare books as well as paintings and sculpture.

At a sale conducted by this firm in New York in October, 1935, American paintings of considerable note brought very low prices. For "Girl Crochet-

ing" by E. C. Tarbell, which, 20 years ago, was acquired at private sale for fifteen thousand dollars, at this sale brought only \$1800.

The demand for prints as well as for paintings was less in 1935 than formerly, and prices were lower, but a phenomenal record was made at exhibitions of etchings by John Taylor Arms held at the Kennedy Gallery and by Kerr Eby in the Grand Central Galleries, 62 prints being sold from the former and 59 from the latter.

ASCENSION. See ST. HELENA.

ASHANTI. See GOLD COAST.

ASIA. See CHINA, JAPAN, SOVIET CENTRAL ASIA, SIBERIA, INDIA, and the other articles on the subdivisions of the continent

ASIR. See ARABIA under *Saudi Arabia*.

ASSYRIANS. See IRAQ under *History*.

ASTRID (SOPHIE LOUISE THYRA), QUEEN. The Queen of the Belgians was killed in an automobile accident near Kussnacht, on Lake Lucerne, Switzerland, Aug. 29, 1935. She was born in Stockholm, Nov. 17, 1905, the third daughter of Prince Charles, Duke of Vastergotland, brother of the King of Sweden, and niece of the King of Denmark. Her education was that of the average upper middle class Swedish girl, and she was taught the intricacies of housekeeping and cooking, as well as languages, music, and painting.

On Sept. 21, 1926, her engagement to Crown Prince Leopold of Belgium was announced by King Albert. The civil ceremony took place on Nov. 4, 1926, in the throne room of the royal palace in Stockholm, and six days later, the church wedding took place in the cathedral of St. Gudule in Brussels, a dispensation being required as the Princess was a Lutheran. On Oct. 11, 1927, Princess Josephine was born; on Sept. 7, 1930, Prince Baudoin, and on June 6, 1934, Prince Albert. On Aug. 5, 1930, Princess Astrid was received into the Roman Catholic Church by Cardinal van Roey in the Archbishop's palace at Malines.

At the death of King Albert of Belgium on Feb. 17, 1934, the Crown Prince ascended the throne, and Princess Astrid became Queen of the Belgians. Astrid, both as Princess and Queen, won the hearts of the Belgian people by her simplicity and kindness.

ASTRONOMY. Among the outstanding events in astronomy during 1935 was the discovery of the "forbidden" lines of chlorine by R. H. Stoy in the spectra of gaseous nebulae. These lines arise from the doubly ionized chlorine atom and lie in the green at 5538 and 5518 Angstroms.

Since Bowen's fundamental investigations in 1927, it has been known that the lines in the spectra of gaseous nebulae are mainly of the "forbidden" type—which are emitted only by an exceedingly rarefied gas. Now atoms of all sorts have ordinary spectral lines, but only a limited number of atoms (which have spectra more complicated than the average) can show forbidden lines; among the lighter atoms which can do so are carbon, nitrogen and oxygen, following which come silicon, phosphorus and sulphur. By removing an electron from the atoms fluorine is added to the first group in place of carbon, and chlorine takes the place of silicon; another ionization puts in neon and argon. A year or so ago neon was recognized in the nebulae by the presence of forbidden lines of its atoms, some with two electrons missing, some with four. More recently highly ionized argon has been detected in the same way.

The discovery of the lines of chlorine is of much interest since it is the first direct evidence of the

existence of chlorine in an astronomical body. All the first 30 elements in their natural order have now been identified in the depths of space. Those which remain unidentified are all rare on the earth, and good reasons are known why they should be hard to detect with the spectroscope. The last outstanding element of reasonable abundance was chlorine. Now at last it has been detected, and one more confirmation given to the conviction that the general composition of matter is everywhere the same throughout the universe.

Another important event was the discovery by Berman that the star R Coronae is a hot carbon star. There are two kinds of red stars, known as types M and N. The N stars characterized by an abundance of carbon and its compounds, the M stars by titanium oxide; M stars are about 100 times more numerous than N stars of the same apparent brightness, hence excess oxygen is the normal condition in a star, excess carbon rare. So long as the temperature is low enough to permit the formation of compounds in the stellar atmospheres, this distinction between "oxygen stars" and "carbon stars" is the most conspicuous of all spectral differences. For a long time this difference was sought for in vain in the hotter stars. The sun is an oxygen star.

Berman has recently made a very careful spectroscopic study of the remarkable variable star R Coronae. This is one of the strangest stars in the sky. Normally, for years at a time it is of the 6th magnitude with insignificant fluctuations. At irregular and quite unpredictable intervals it drops fairly rapidly to the 11th or even the 13th magnitude—only $\frac{1}{4000}$ th of its usual brightness. It may remain faint for a few weeks or for many months—then it returns to normal, usually more slowly than it faded. The spectrum at maximum is of class F7 on the Harvard System—not very different from our sun's except that it shows conspicuously the characteristics of a super-giant star. Like almost all other intrinsically variable stars it is of high luminosity—greatly exceeding the sun's (possibly when at its faintest it about equals the sun in luminosity). When the spectrum is compared in detail with that of an ordinary super-giant star such as Gamma Cygni, there are two important differences: The hydrogen lines are very weak, as has been noticed before; and a few faint lines of carbon in the blue, which are inconspicuous in ordinary stars, are here remarkably strong. By a detailed study of more than 600 lines Berman analyzed the atmosphere and determined the amounts of more than 20 elements which are present. For the metals the relative proportions are very similar to our sun's, but carbon is enormously more abundant and hydrogen less so.

A comparison with Gamma Cygni which being a highly luminous star is a fairer standard of comparison than the sun, shows that in Gamma Cygni the atmosphere is 99 per cent hydrogen and 0.5 per cent carbon, while in R Coronae there is 27 per cent hydrogen, 69 per cent carbon and 14 per cent of metals. R Coronae has a surface temperature of 5400°; a surface gravity $\frac{1}{4000}$ th of the sun's; a luminosity 1000 times the sun's; and a diameter of 20 or 30 million miles. Although this discovery of Berman's is very remarkable, R Coronae now being the hottest of known carbon stars, it should be remembered that some of the stars in which carbon is relatively rare have surface temperatures as high as 40,000°.

J. C. Duncan made some photographs of the well known ring nebula in Lyra with the 100 inch

telescope at the Mt. Wilson observatory after an aluminum coating for the telescope mirrors had replaced silver, and the photographs obtained show that this nebula has twice the diameter formerly supposed. Much of the radiation from the nebula is in the ultra-violet region of the spectrum. This radiation is invisible to the eye and is absorbed by silver, but strongly affects photographic plates and is reflected by aluminum.

Pannekoek and DeVerwey have calculated, from purely theoretical considerations, the widths of spectral lines of hydrogen. With a formula showing what proportion of atoms in a gas of given density would be exposed to electric fields of a certain magnitude, they computed the smearing effect upon various hydrogen lines; and assuming an atmosphere composed mainly of hydrogen they worked out the combined effect of absorption by layers at all levels, thus finding what the stellar line should look like. Separate computations were made for each of the four principal hydrogen lines, for different values of stellar temperatures, and for several values of surface gravity.

As it is known from atomic theory that the number of hydrogen atoms at work absorbing the red line is much greater than for the blue, while for the violet lines it is smaller still one might expect that the red line would be strongest and widest, and the others steadily weaker. But the Stark effect widening is greater for the blue and violet lines, and the net result of these two influences is to make all four lines almost equal in width; and measures of spectra show that they actually are. At very high temperatures, hydrogen is almost all ionized, and the four lines are weak.

Taking everything into account (including the influence of metallic atoms which are present) Pannekoek finds, for a value of gravity such as exists in Sirius or Vega, the lines should be widest at a temperature of about 8500° (which is probably not far from that of these stars). His curves, showing the width of the lines and the way in which the intensity should change from the centre toward the edge, agree remarkably well with measures of the lines in Sirius and Vega. Now the calculations were made on a basis of pure theory, making no use of any observed property of stars (save that their atmospheres were composed mainly of hydrogen). This agreement with observation is a noteworthy success in the interpretation of nature. The theory predicts precisely what the hydrogen lines in Sirius are like—and could have been worked out in the laboratory by men who had never seen a star.

An equally satisfactory result is the explanation of the abnormal behavior of hydrogen lines in stars of different brightness. If the force of gravity is a hundredfold greater on one star than on another of the same temperature, the formulas show the atmosphere of the first star will be so much hazier that the actual quantity of gas (per unit area) above the level to which one can see will be only one tenth as great as in the second. But the greater Stark effect in the first star will broaden the lines so much that they will be two and one half times as wide as in the other.

The greatest known force of gravity is found at the surfaces of white dwarfs. On the companion of Sirius it is about a thousand times as great as on the sun or on Sirius. One might expect that the hydrogen lines would be correspondingly widened and observation shows they are. However, the atmospheres of white dwarfs should be thin, containing much less material per square

mile, and this accords with the fact that the lines of metals are hardly to be seen in their spectra. Pannekoek concludes that, when the width of these lines has been accurately measured, astronomers may be able to calculate from this alone the force of gravity at the surface of a white dwarf, and thus get an estimate of its mass.

Kuiper has given many interesting particulars about the white dwarf A.C. + 70° 8247 which is, at present, the smallest star known. Its diameter is roughly half that of the Earth. Its surface temperature is $28,000^{\circ}$; and its distance from the sun is about one and a half parsecs. The average density of this star is about 36,000,000 times that of water. Thus, this star is not only the smallest star known, but also is the most dense. Its average density is about 90 times that of van Maanen's star, which has previously been the densest known object in the heavens.

The long-period variable R Aquarii presents a complicated sequence of phenomena which may include features of general astrophysical interest. Merrill has extensively described and discussed its composite spectrum, and compared it with the phases of other variable stars.

Vysotsky and van de Kamp have made an analysis of the proper motions of 18,000 faint stars. From their analysis they concluded that the sun's period of revolution about the galactic centre is 220,000,000 years, and the distance to the centre of rotation is 10.5 kiloparsecs. This result agrees quite closely with an independent study based on a different method of attack made by J. M. Mohr. Mohr concluded that the sun's orbit has an eccentricity of 0.08 and that the sun is now approaching perigalacticum and will reach apogalacticum in about 100,000,000 years.

Jekowsky has calculated the radius of each asteroid by taking its albedo to be equal to the average of those of Mars and Mercury and then considering the radius to be a function of the mean distance from the sun and the stellar magnitude of the asteroid. By plotting the radius against the number of asteroids, he concluded that all asteroids with radius greater than 60 km. have been discovered and that the maximum number of discoveries to-day is of asteroids with radius less than 30 km. The total number of asteroids is found to be 2334 and the total mass, assuming that all asteroids have equal mean density, is 6.4 times greater than the mass of Ceres.

The heavy numerical calculations involved in astronomical work, especially in Celestial Mechanics, are being strikingly transformed by the development of calculating machines, which have rapidly been displacing logarithms during recent years. The British Nautical Almanac Office has been completely mechanized by the adoption and modification of commercial machines to special problems—one machine has been constructed to compute automatically the Lunar Ephemeris. At Columbia University special machines are now in use for the rapid calculation of ephemerides of minor planets with special perturbations included; and under the direction of E. W. Brown, the Lunar Theory, on which Brown spent 20 years of computation, will be done over again in about one year.

The one hundredth anniversary of the birth of Simon Newcomb was celebrated this year. A memorial was unveiled at his birthplace near Wallace, Nova Scotia. Simon Newcomb was one of the three Americans elected to the Hall of

Fame of New York University at the eighth quinquennial election.

Phenomena. Comet 1935a (Johnson), discovered January 8, was the first new comet to be seen since 1933, thus ending an unusually long period with no comet discoveries. Three other comets appeared, including the first return of Comas-Sola since its discovery in 1926.

A minor planet 1935QN was discovered in declination +60°; the orbit is inclined nearly 39° to the ecliptic.

The year 1935 was remarkable for the series of eclipses which occurred. There was the maximum possible number of eclipses, viz., seven, of which 5 were solar and 2 lunar; this is a rare combination—usually when 7 eclipses occur, 4 are solar and 3 lunar. The last year with 5 solar and 2 lunar eclipses was 1805, and the next will be 2485. The small partial solar eclipse of Jan. 4, 1935, in the Antarctic was the 79th and last Saros recurrence of this eclipse; it now passes off the earth, having first occurred August 30, 528 A.D., Old Style, as a small partial eclipse in the Arctic regions.

Necrology. C. E. St. John, April 26; E. B. Frost, May 12.

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ATHENS. See ARCHæOLOGY.

ATHLETICS. Track and Field. A one-man show, perfectly staged by Jesse Owens, Ohio State University sophomore, was the outstanding event of the 1935 track and field season, a season of preparation for the rush of an Olympic year in 1936. This young Negro, already a well established star, entered the Western Conference championships at Ann Arbor, Mich. in May and in the course of one sunny afternoon proceeded to shatter three world's records and tie a fourth in the four events in which he competed. He raced the 100 yards in 9.4 sec., equalling Frank Wycoff's mark set in 1930. He then moved over to the broad jump straightaway and leaped 26 ft. 8½ in., more than 6 inches farther than the Japanese star, Chuhei Nambu, had jumped when making the world's mark 4 years before. Jesse Owens then reported for the 220 yard dash final and sped down the track in 20.3 sec., two tenths of a second faster than Roland Locke's standard set in 1926 and a tenth of a second speedier than Ralph Metcalfe's internationally unrecognized collegiate mark. And for a climax, Owens, a novice at hurdling, raced over the 220 yard route of low hurdles in 22.6 sec., eclipsing the 11 year old mark of Charley Brookins as well as all collegiate marks. All of Owens' Western Conference marks set that day at Ann Arbor were duly recognized by the Amateur Athletic Union when that body met in New York late in December.

Owens proved his greatness by winning the four events again in the Central Intercollegiate meet and later, on the Pacific Coast made another four-sweep at the N.C.A.A. championships. But, at the

National A.A.U. meet at Lincoln, Nebraska, in July, Owens fell before Eulace Peacock, a Negro performer from Temple University, in both the 100 yard dash and in the broad jump and these two Negroes, along with Metcalfe, who split them in the 100 yard final at Lincoln, loomed as sure-fire bets for the United States Olympic squad at Berlin.

Aside from Owens' record smashing burst, the record shattering of the year was fairly mild in comparison with the preceding year. Keith Brown of Yale set a new pole vault mark of 14 ft. 5½ in.; Norman Bright set an American 2 mile record of 9 min. 13.2 sec.; and Roy Staley, Leroy Fitzpatrick, Phil Cope, and Tom Moore, all Californians, returned 14.2 sec. for the 110 meter, or 120 yard, high hurdles.

Once again mile running was the feature of the outdoor as well as indoor campaigns, with Glenn Cunningham again in the rôle of star. The Kansan was supreme indoors, with his 1934 rival, Bill Bonthron never able to recapture his old speed. But in the final of the season, at Princeton, Cunningham fell before the style and speed of Jack Lovelock, the New Zealander, who beat Cunningham and Bonthron in 4 min. 11.2 sec.

The United States quarter milers again were superb, with young Eddie O'Brien of Syracuse and Jimmy Luvalle of U.C.L.A. the standouts. O'Brien, a newcomer to the sport, won the National A.A.U. 400 meters at Lincoln and later toured Europe without suffering a defeat. Luvalle, Intercollegiate A.A.A.A. and N.C.A.A. winner, beat O'Brien by a stride in the former meet in 47.3 sec., but that was before the Syracusan settled into his all-winning stride.

The New York Athletic Club squad, headed by Percy Beard, the hurdler, O'Brien, Joe McCluskey, the long-distance runner, and Horace Odell, javelin thrower, won the National A.A.U. indoor and outdoor team titles. The University of Southern California took both the Intercollegiate A.A.A.A. and N.C.A.A. team honors and Manhattan College won the indoor intercollegiate.

Miss Helen Stephens, newest sprint sensation among the women, turned in the only notable achievement of the women's season when she defeated the mighty Miss Stella Walsh indoors and outdoors and shattered most of the existing women's records.

ATOMIC NUCLEI. See CHEMISTRY

ATTERBURY. GEN. WILLIAM WALLACE. An American railway official, died in Philadelphia, Sept. 20, 1935. Born at New Albany, Ind., Jan. 31, 1866, he was graduated from the Sheffield Scientific School, Yale University, in 1886. In that year he became an apprentice in the Altoona shops of the Pennsylvania Railroad, and three years later was made a road foreman on various divisions of the line, being promoted to assistant engineer of motor power of the Northwest System of the Pennsylvania Line in 1892. A year later he was appointed a master mechanic of the Pennsylvania Company and stationed at Fort Wayne, Ind. During the strike of the American Railway Union in 1894 he kept the Western Division of the Line open by running the first train through, and later was successful in disentangling a traffic snarl in Pittsburgh, being rewarded with the post of general superintendent of motive powers on the lines east of Pittsburgh and Erie in 1896. In 1903 he became general manager, and in 1909 was elected fifth vice president in charge of transportation. Two years later he was advanced to fourth vice president,

subsequently becoming vice president in charge of operations.

In 1917, after the United States had entered the War, General Atterbury was asked to take charge of the problem of railroad transportation in France. He accepted and served until 1919, being rewarded with the rank of brigadier-general and the Distinguished Service Medal, as well as decorations from the British, French, and Belgian governments. To erect a railroad system distinct from that of the French railways was one of his tasks and before the end of the War he had built 800 miles of railroad, constructed miles of docks and quays, and had succeeded in linking the English Channel with the Western Front. Fifteen hundred locomotives were operated on this line, 20,000 freight cars were hauled, and a staff of 70,000 was employed.

Upon his return he rejoined the Pennsylvania Railroad, as vice president and in 1925 was elected to succeed Samuel Rea as its president. During his incumbency the electrification of the system running south to Washington began. When, in 1927, the question of running an air transport system in connection with the railroad was brought up, he was skeptical, but a year later changed his views, and the Pennsylvania Railroad became part owner of the newly-formed Transcontinental Air Transport, Inc., of which Col. Charles A. Lindbergh was chosen consulting aeronautical engineer. Under the General's guidance the Pennsylvania made rapid strides, and in 1929 the net operating income rose to \$133,000,000. When faced with the loss of revenue caused by the country's industrial depression, a vigorous policy of retrenchment was the Company's course. In 1932, money was borrowed from the Reconstruction Finance Corporation in order to finance special projects, such as the further electrification of the line, and in 1934, a loan for \$77,000,000 was obtained from the Public Works Administration to be used for furthering the betterment of the road. In April 1935, General Atterbury, having been inactive on the Company's behalf for almost a year, retired.

In 1916, while serving in the capacity of president of the American Railway Association, to which office he had been elected, Atterbury rendered aid to the Government by transporting troops and supplies to the Mexican border. In 1934, when the Association of American Railroads was formed, he was made a member of the board of directors. General Atterbury was honored by several universities, including Yale and Pennsylvania, and was active in many corporations and societies.

AUSTRALIA. A self-governing dominion of the British Commonwealth of Nations. Capital, Canberra.

Area and Population. The area of the six States and two Territories, the census population of June 30, 1933, and the estimated population on June 30, 1935, are shown in the accompanying table.

AREA AND POPULATION OF AUSTRALIA

States and Territories	Area in sq. miles	Population	
		June 30, 1933	June 30, 1935
New South Wales .. .	309,432	2,600,847	2,644,760
Victoria	87,884	1,820,261	1,837,966
Queensland	670,500	947,534	967,947
South Australia	380,070	580,949	584,815
Western Australia	975,920	438,852	445,692
Tasmania	26,215	227,599	228,728
Northern Territory	523,620	4,850	5,111
Federal Capital Territory	940	8,947	9,286
Total	2,974,581	6,629,839	6,724,305

During 1934 births numbered 109,475 (111,269 in 1933); deaths, 62,229 (59,117 in 1933); and marriages, 51,465 (46,595). A total of 53,704 persons entered the country in 1934 and 51,424 departed. The estimated populations of the chief cities (all of them State capitals) on Dec. 31, 1934, were: Sydney, 1,249,040; Melbourne, 1,000,000; Brisbane, 304,930; Adelaide, 313,778; Perth, 208,448; Hobart, 60,500. The population of Canberra was 7500.

Education. Primary education is free and compulsory. In 1932 there were 72 kindergartens, with 3895 pupils, 10,246 State schools, with 934,075 pupils; 1820 private schools, with 220,723 pupils; and six State Universities (at Sydney, Melbourne, Brisbane, Adelaide, Perth, and Hobart), with 9942 students.

Production. The estimated value of production, by industries, for the fiscal years ended June 30, are shown in the accompanying table from the *Quarterly Summary of Australian Statistics*.

VALUE OF AUSTRALIAN PRODUCTION, YEARS ENDED JUNE 30 [In thousands of pounds sterling]

Item	1932	1933	1934
Agricultural	£ 74,489	£ 75,562	£ 70,700
Pastoral	61,540	64,851	95,600
Dairy, poultry, bee-farming	41,478	39,622	40,300
Forestry and fisheries	7,703	8,470	9,400
Mining	13,352	15,583	17,600
Manufacturing * ..	106,456	114,136	121,800
Total	£ 305,018	£ 318,224	£ 355,400

* Value added in process of manufacture.

A total of 22,454,327 acres were under crops in 1933-34, of which 14,901,271 acres were devoted to wheat. The wheat crop in 1934-35 totaled 133,488,616 bu. (177,337,803 bu. in 1933-34). Other crops in 1933-34 were: Oats, 16,922,031 bu.; corn, 7,494,080 bu.; hay, 3,582,748 tons; sugar cane, 4,898,040 tons. The estimated production of cane sugar in 1934 was 660,000 tons. The number of sheep in Australia in 1934 totaled 114,099,496. The wool clip for the year ended June 30, 1935, totaled 970,000,000 lb. (914,000,000 lb. in 1933-34) and sales for the year totaled £38,526,025 (£52,165,778 in 1933-34). Other livestock (1933) included 13,512,487 cattle, 1,749,040 horses, and 1,046,867 swine. The production of butter in 1933-34 was 450,936,428 lb.; cheese, 38,476,493 lb.; bacon and ham, 71,490,279 lb.

The value of mineral production increased to £20,025,586 in 1934 from £17,607,968 in 1933. The principal minerals, with their values in the calendar years 1934 and 1933, respectively, were: Gold, £7,536,674 (£6,406,061); silver and lead, £2,922,685 (£2,570,274); copper, £397,118 (£531,152); tin, £730,867 (£540,331); coal, £6,303,170 (£5,975,900). In 1933-34 there were 23,297 industrial establishments in Australia, with 405,909 employees and an output valued at £330,134,060 (£129,091,915 exclusive of the value of materials used). In 1932-33 the total manufactured output was valued at £304,797,868 and the value added in process of production was £119,203,148.

Foreign Trade. The trend of Australian for-AUSTRALIAN FOREIGN TRADE, YEARS ENDED JUNE 30TH [British currency values]

	Imports	Exports *	Balance
1929-30	£131,081,320	£125,127,148	£ - 5,954,172
1930-31	60,959,633	89,325,968	+ 28,366,335
1931-32	44,712,868	85,348,607	+ 40,635,739
1932-33	58,013,860	96,597,225	+ 38,583,365
1933-34	60,712,926	98,572,632	+ 37,859,706
1934-35	74,126,586	90,042,228	+ 15,915,642

* Including reexports.

eign trade during the course of the world economic depression is shown in the accompanying table. The figures include merchandise, bullion and specie.

In Australian currency values, exports amounted to £120,943,317 in 1932-33, £123,441,209 in 1933-34, and £112,756,978 in 1934-35. The value of the principal exports (Australian currency values) in 1934-35 was: Greasy wool, £34,208,191; scoured wool, £5,047,884; wheat, £11,612,357; butter, £9,586,776; gold, £9,816,598; wheat flour, £4,607,383; lamb, £3,515,230; beef, £2,547,342; lead, £2,415,392. Textiles, tea, olive oil, iron and steel, automobiles, machinery, printed matter, etc., are the leading imports.

Finance. For the fiscal year ended June 30, 1935, total revenues of the Federal government, including postal receipts and government enterprises, were £77,369,105 and total expenditures were £76,657,900. Returns for the previous fiscal year were: Receipts, £73,941,953; expenditures, £72,640,383. The budget estimates for 1935-36 placed receipts at £77,700,000 and expenditures at £76,628,000, the anticipated surplus being £1,072,000.

The six State governments budgeted for a deficit aggregating £5,524,000 in 1934-35, but the actual deficits totaled £3,765,000. South Australia realized a surplus of £36,000. During the same period the States made payments aggregating £4,600,000 into sinking funds. The Commonwealth public debt on June 30, 1935, totaled £394,151,070 and the aggregate debt of the States was £847,963,751, making a total of £1,242,114,821. Of the latter total £650,093,181 were held in Australia, £546,456,963 in London, and £45,564,677 in New York. The aggregate debt of the Australian municipalities on June 30, 1935, was £85,456,221.

Communications. Federal and State railways open for traffic on June 30, 1934, had 27,130 miles of line; private railways, 847 miles. For the year 1933-34, the government railways reported gross earnings of £37,295,000 and working expenses of £26,916,000. Highways, mostly under State and local control, aggregated about 330,000 miles. There were 455,199 passenger cars and 116,341 motor trucks in Australia in 1934. Air routes in operation on June 30, 1934, extended 8090 miles. There were on the same date 130 public airdromes and 334 landing fields. Air mail service between Australia and London by way of Singapore was inaugurated on Dec. 10, 1934, and the line was opened to passengers in March, 1935. A weekly air service connecting Adelaide on the south coast with Darwin on the north coast was announced in 1935. The net tonnage of vessels entering the ports with cargo and in ballast in the overseas trade during 1934 was 5,353,000, tonnage cleared, 5,411,000.

Government. Executive power is vested in the King, who acts through a governor-general and a ministry responsible to the Federal Parliament. There is a Senate of 36 members (six from each State), elected for six years, and a House of Representatives of 74 members apportioned among the States on a population basis. The appointment of Sir Alexander Hore-Ruthven to succeed Sir Isaac Isaacs as Governor-General was announced in August, 1935. The composition of the House of Representatives following the election of Sept. 15, 1934, was: United Australia Party, 32; Country Party, 15; Federal Labor Party, 18; Lang Labor Party, 9.

The cabinet appointed Nov. 7, 1934, represented a coalition of the United Australia and Country

parties. Members of the cabinet were: Prime Minister and Treasurer, Joseph A. Lyons; Commerce, E. C. G. Page; External Affairs and Territories, Sir G. F. Pearce; Attorney-General and Minister for Industry, R. G. Menzies; Vice President of the Executive Council and Minister for Health and Repatriation, W. M. Hughes; Defense, Archdale Parkhill; Interior, T. Patterson; Trade and Customs, T. W. White; Postmaster-General and Minister Controlling Development and Science and Industry, Senator A. J. McLachlan.

HISTORY

Internal Developments. The steady economic recovery inaugurated in Australia in 1933 continued during 1935. Although the value of exports declined in the 1934-35 fiscal year, most other business indices were favorable. The advances recorded in agricultural prices, railway earnings, and employment had a favorable effect on Federal and State budgets and on special relief requirements. Factory employment in 1934-35 reached an all-time record. Unemployment among trade union members in the third quarter of 1935 was 15.9 per cent, compared with 20.4 per cent in July-September, 1934. The last quarter of 1935 was marked by satisfactory crops, relative labor tranquility, a broad increase in export prices, and the maintenance of good business volume, particularly in manufacturing and construction.

In his budget speech before the newly assembled Federal Parliament on September 23, Prime Minister Lyons proposed slight reductions in emergency taxation as a result of the 1934-35 budget surplus (see *Finance*) and the continued favorable trade balance. A cut in the special property income tax from 6 to 5 per cent and a lower excise on tobacco were proposed, together with further withdrawals of the drastic salary cuts imposed upon Cabinet ministers, members of Parliament, and other civil servants.

The friction between the Federal and State governments over the distribution of loans—one of the major sources of irritation which led the Premiers of Western Australia, South Australia, and Tasmania to warn the Commonwealth in 1934 that their States might secede if the Federal Constitution were not revised—was again evidenced during the meeting of the Australian Loan Council in May. The Council, established a decade earlier to eliminate competition in the loan markets among the State and Federal governments, agreed upon loans of £31,000,000 during 1935-36, to be spent largely on public works. The public works fund was divided as follows, after a heated debate marked by Victoria's strenuous protests at the larger sum allotted to New South Wales: Commonwealth, £5,750,000; New South Wales, £8,000,000; Victoria, £4,000,000; Queensland, £3,000,000; South Australia, £2,100,000; Western Australia, £2,600,000; Tasmania, £600,000.

Western Australia's efforts to secede from the Commonwealth, in compliance with the mandate received by the State officials in the 1933 referendum, met another obstacle in 1935. Rejected by the Commonwealth Government, the secession petition had been presented to the British Parliament in December, 1934. On May 24, 1935, a parliamentary Joint Select Committee reported that under the Statute of Westminster the Imperial Parliament had no authority to intervene in the internal affairs of a Dominion unless specifically requested to do so. Following the failure of the Western Australian petition in London, the Australian Government

made a new effort to conciliate opinion in that isolated State. The Federal Cabinet in June traveled 2000 miles from Canberra to Perth, the capital of Western Australia, to hold a meeting and took advantage of the opportunity to discuss the economic grievances to which the State was subjected by Federal tariff and other policies. Dr. Earle Page, the Acting Prime Minister, proposed that joint State and Federal councils be established to handle economic issues in the same manner that the Australian Loan Council dealt with financial questions. Premier Collier of Western Australia made it plain that his State had no desire to withdraw from the federation, provided it received fair treatment at the hands of the more populous States.

State elections held in Victoria on March 2 and in New South Wales and Queensland on May 11 retained the existing governments in power. In Victoria the Labor Party won back only one of the 17 seats in the Legislature lost in the 1932 elections. A rift in the United Australia-Country party coalition, however, led to the resignation of the ministry under Sir Stanley Argyle (United Australia party) and the formation on April 2 of a Country-Labor coalition under the Country party leader, A. A. Dunstan. In Queensland, where the Labor party under the conservative leadership of Premier Forgan Smith had suffered only one defeat in 20 years, Labor increased its representation in the Legislative Assembly from 33 to 45. In New South Wales former Premier J. T. Lang, leader of the radical wing of the Australian Labor party, made an unsuccessful effort to oust the United Australia-Country party coalition which overthrew him in 1932. The new standing of the parties was: United Australia Party, 37; United Country Party, 23; Lang Labor Party, 30. One immediate result of the New South Wales election was to strengthen the position of the Lyons Government in the Federal sphere.

Relations with Britain. The outcry raised in the Lancashire textile district of England in 1934 against increases in the Australian tariff on British cotton goods was reciprocated in Australia in 1935 when the British restricted meat imports in the interests of domestic livestock growers. Under the Ottawa Agreements of 1932, and the Anglo-Argentine commercial treaty of 1933, exports of Dominion frozen beef to the United Kingdom had nearly doubled while Argentine exports of chilled and frozen beef to Britain had declined sharply. During this period Australia and New Zealand, through progress in research, developed a successful chilled beef industry also, but its expansion was blocked by the Anglo-Argentine Agreement. The Dominions accordingly agitated for the abrogation of the latter treaty, which they declared a violation in principle of the Ottawa Agreements of 1932.

Meanwhile the British livestock industry had been forced to the wall by cheaper Dominion meat, forcing the London Government in 1934 to advance cattle growers a subsidy of £3,000,000. In order that the value of the subsidy might not be lost through excess imports, Britain sought to induce the Dominions to limit their meat shipments. The Australians refused to consider such action until the British Government early in 1935 announced plans for levying a tariff on imported meat, the proceeds of which would go to subsidize the home producers. Faced with the loss of a vitally important market, the Lyons Government on Jan. 11, 1935, restricted beef exports to Britain for a three-months' period. Restrictions on exports of mutton and lamb were announced in March and shortly

afterwards a new tariff schedule, providing for important reductions on British goods, was introduced in the Australian Parliament.

Extended negotiations followed in London, in which Prime Minister Lyons and the other Dominion Premiers present for the King's Jubilee participated. In return for the temporary retention of the British preferential quota and an apparent promise that their chilled meat would receive preference over the Argentine product at the expiration of the Anglo-Argentine Agreement on Oct. 31, 1936, Australia and New Zealand agreed to keep their exports of mutton and lamb within fixed limits to the end of 1936, the quantities varying in proportion to the United Kingdom demand. The Dominions also agreed to specified restrictions on exports of pork, veal, and beef to the end of 1935. The British agreed to postpone the tariff on imported meat until Oct. 31, 1936. This agreement was favorably received in Australia and New Zealand.

Foreign Relations. Realizing that Australia could not hope to dispose of its entire exportable surplus in Great Britain, the government vigorously strove during 1935 to find new outlets in Italy, France, Germany, Belgium, Czechoslovakia, Japan, and the United States. Prime Minister Lyons discussed the trade problem with Washington authorities en route home from London. A trade mission was sent to India. A Japanese good-will mission, headed by Katsujō Debuchi, received a cordial welcome when it arrived in Australia in September to return the visit of an Australian trade mission to Japan the previous year.

While anxious to develop trade with Japan, Australia continued to view the Japanese expansion with suspicion. At a dinner given Mr. Debuchi, Sir Frank Clarke, president of the Victoria Legislature, bluntly warned Japan against expanding southward in Australia's direction. Fear of Japan, together with disturbed conditions elsewhere in the world, led to a substantial increase in Australian arms expenditures during the year. Defense preparations included the motorization of military forces, further coast defense rearmament, establishment of a local anti-aircraft gun factory, and the increase of the air force to 200 machines. A public works project for standardizing the gauge of the main railway systems to facilitate mobilization also was considered.

The development of the Anglo-Italian crisis over Ethiopia commencing in September produced a bitter internal debate in Australia on the issue of supporting the mother country. The Lyons Government in September decided to back Britain to the limit and the Australian delegate to the League of Nations actively supported the application of sanctions against Italy. Australian warships also joined the British fleet in the Mediterranean. The Lang Labor Party, however, won unexpected support for a resolution opposing Australia's involvement "in a second World War developing out of a conflict of imperial trading interests, notwithstanding any decision recorded by the League of Nations." The resolution was defeated in the Federal House of Representatives by a vote of 27 to 21. When William M. Hughes, vice president of the Executive Council who was Prime Minister of Australia during the World War, dissented from the government's policy on sanctions Mr. Lyons on November 6 forced his resignation from the cabinet. See GREAT BRITAIN under *History*.

AUSTRIA. A federal state of central Europe comprising the nine provinces of the City of Vien-

na, Lower Austria, Upper Austria, Salzburg, Styria, Carinthia, Tirol, Vorarlberg, and Burgenland. Capital, Vienna (Wien).

Area and Population. Austria has an area of 32,369 square miles; the population at the census of Mar. 22, 1934, totaled 6,759,062 (6,534,481 at the 1923 census). The 1934 census showed 3,248,000 males and 3,512,000 females. Living births in 1934 numbered 91,294; deaths, 85,387; marriages, 44,122. Emigrants in 1933 numbered 1404 (2129 in 1932). Provisional 1934 census returns for the chief cities were: Vienna, 1,874,581 (850,019 males and 1,024,562 females); Graz, 152,627; Linz, 108,854; Innsbruck, 61,003; Salzburg, 40,364; Wiener Neustadt, 36,812; St. Pölten, 36,283. At the 1934 census, there were 6,131,463 Roman Catholics, 236,262 Protestants and other Christians, 209,065 Jews, and 170,036 others.

Education. Primary education is compulsory. In 1934 there were 886,500 pupils in 5335 public and private elementary schools; 66,020 pupils in 169 secondary schools; and 16,281 students in the three state universities (Vienna, Graz, and Innsbruck). There were also various commercial, theological, and vocational schools.

Production. Agriculture, manufacturing, mining, and lumbering are the principal occupations. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in metric tons) wheat, 360,300 (397,800); rye, 607,000 (687,000); barley, 298,100 (332,900); oats, 500,500 (502,800); corn, 149,800 (136,600); potatoes, 2,795,400 (2,354,900); sugar beets, 1,341,400 (1,067,500); raw flax fibre, 2200 (2800); linseed, 500 (440). The wine yield in 1934-35 was 789,000 hectoliters (hectoliter equals 26.4 U. S. gallons). The forests, covering 37 per cent of the total area, are an important source of income. Mineral and metallurgical production in 1934, with 1933 figures in parentheses, was (in 1000 metric tons): Coal, 251 (239), lignite, 2855 (3014), iron ore, 464 (266); pig iron, 134 (88); steel ingots and castings, 313 (226). The industrial census of 1930 showed 367,652 industrial establishments, with 1,438,967 employees. The clothing industry was the most important but a wide variety of articles were manufactured.

Foreign Trade. Imports in 1934 were valued at 1,154,191,000 schillings (1,148,121,000 in 1933) and exports at 863,024,000 (774,730,000 in 1933). Of the 1934 imports Germany supplied 17.1 per cent; Czechoslovakia, 13.7; Hungary, 11.2; Yugoslavia, 8.5; and United States, 5.3 per cent. Of the exports Germany purchased 15.8 per cent; Hungary, 11.6; Czechoslovakia, 7.4; Yugoslavia, 6.2, and the United States, 1.5 per cent. Coal, coke and briquets, swine, chemicals and drugs, corn, and raw cotton were leading imports, while the chief exports were iron and steel, wood, paper and cardboard, nonferrous metals, and electric machinery.

The favorable balance on foreign tourist traffic in 1935 was estimated at 150,000,000 schillings and receipts from exported electric power at 18,000,000 schillings, thus offsetting the adverse trade balance for the year.

Finance. The 1935 budget estimates placed ordinary receipts and expenditures at 1,846,700,000 schillings and 1,899,900,000 schillings, respectively. Extraordinary expenditures, to be raised through new loans, were fixed at 100,000,000 schillings. Budget deficits had been continuous since 1930. Final returns for 1934 showed revenues of 1,348,000,000 schillings, ordinary expenditures of 1,464,000,000 schillings, and extraordinary expenditures of 110,000,000 schillings. National defense expenditures,

which rose to 254,000,000 schillings from the estimates of 191,000,000 schillings, were chiefly responsible for the unexpectedly large deficit.

The national debt on Dec. 31, 1934, totaled 3,526,500,000 schillings (3,287,800,000 on Dec. 31, 1933). The 1934 debt was divided as follows: Internal, 1,113,500,000 schillings; external, 2,413,000,000 schillings. The schilling (par value, \$0.2382) exchanged at an average of \$0.1542 in 1933 and \$0.1879 in 1934.

Communications. Of the 4174 miles of railway line open in 1933, 3611 miles were owned or operated by the state. In the same year the state lines carried 59,997,000 passengers and 18,510,294 metric tons of freight. The motor services of the Federal Railways in 1934 carried 5,000,000 passengers and 65,000 metric tons of freight. Highways extended about 8650 miles. State-subsidized air lines operate within Austria. Vienna was an important junction of the European air network.

Government. The Constitution of May 1, 1934, declared Austria "A Christian, Federal State on a corporative basis." Repudiating the liberal, democratic provisions of the previous republican constitution, it provided for an "authoritarian" or Fascist régime, in which the Roman Catholic Church occupied a privileged position. Extensive powers were placed in the hands of the President, to be elected for seven years by the burgomasters (mayors) of Austria from three candidates selected by the Federal Assembly. He was empowered to appoint and dismiss the Chancellor at his discretion. The press, the theatre, and the radio were placed under strict government control. In place of a representative assembly, provision was made for four appointive advisory councils, as follows: (1) A Council of State of 40 to 50 "worthy citizens," (2) a Federal Cultural Council of 30 to 40 representatives of legally recognized churches, educational bodies, sciences and arts, (3) a Federal Economic Council of 70 to 80 representatives of agriculture, industry, commerce, and finance, and (4) a Provincial Council, including the Governor and a financial representative from each province. The Federal Diet, which was to pass on legislation submitted to it by the government, consisted of 20 members of the Council of State, 10 members of the Cultural Council, 20 members of the Economic Council, and 9 members of the Provincial Council. Another body, called the Federal Assembly, was to consist of all the members of the four Councils. Its function was to nominate three candidates for President, to authorize a declaration of war, etc.

President in 1935, Dr. Wilhelm Miklas, who assumed the office in 1928 Federal Chancellor and Minister of Defense, Education, and Justice, Dr. Kurt Schuschnigg. Other members of the cabinet at the beginning of the year were: Vice Chancellor and Minister of Security, Prince Ernst Rudiger von Starhemberg; Finance, Dr. Karl Buresch; Commerce and Communications, Fritz Stockinger; Social Administration, E. Neustadter Sturmer; Interior, Emil Fey; Agriculture and Forestry, Josef Reither; Foreign Affairs, Egon Berger-Waldenegg.

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Internal Affairs. The Fascist-Clerical dictatorship established by Chancellor Dollfuss to check Adolf Hitler's forceful drive for Austro-German union had gained a new lease on life by the bloody repression of the Austrian Socialist and Nazi movements in 1934 (see 1934 YEAR BOOK, pp. 65-

67). In 1935 it steered a precarious and wavering course amid growing dangers at home and abroad. The illegal Nazi and Socialist organizations, undoubtedly controlling between them a strong majority of the population, continued their bitter underground struggle against the government. Dissensions within the Cabinet became increasingly violent, the antagonisms arising from domestic issues being fanned to greater intensity by serious divisions on foreign policy.

The Nazi movement within Austria, despite sporadic propaganda campaigns, remained relatively quiescent throughout 1935. Following the German victory in the Saar plebiscite of January 13, the Austrian government took extreme precautions to check a threatened uprising, but the Nazis contented themselves with a few peaceful demonstrations. In some quarters the apparent weakening of the Nazis was attributed to the incompetence and corruption of their leaders, and a drift from Nazi to Socialist ranks was reported. Other authorities held that for reasons of internal and external policy Hitler had called a temporary halt to the activities of his Austrian adherents. Another explanation advanced was the fear of the government instilled by heavy sentences imposed on Nazis convicted of complicity in the abortive *putsch* of July, 1934, in which Chancellor Dollfuss was killed. Of 752 Nazis tried up to December, 1934, 31 were sentenced to death, 42 to life imprisonment, and the remainder to prison terms aggregating 1967 years. The trials continued with similar results during the first part of 1935. Seventeen defendants were sentenced to death by a Salzburg court early in March for smuggling explosives from Germany shortly before the *putsch*. Later the same month Dr. Anton Rintelen, former Austrian Chancellor; Major Selinger; and Police Commissar Gotzmann, former commander of the Storm Troops in Vienna, received life sentences. Rintelen, then Ambassador to Rome, had been named by Nazi conspirators, who seized the Vienna broadcasting station during the *putsch*, as the successor to Chancellor Dollfuss.

In contrast with Nazi quiescence, the Social Democrats and other radical and liberal groups appeared to be rapidly reorganizing their forces, which had been shattered by the savage civil war of February, 1934. Government efforts to repress the Socialist resurgence were only partly successful. The police, aided by Prince von Starhemberg's reactionary Heimwehr troops, arrested some 200 Socialists during the first anniversary of the February, 1934, struggle. In April, 21 officers of the Republican Defense Corps (Socialist Schutzbund) were convicted of treason and sentenced to varying terms in prison.

Spurred, perhaps, by these developments, the Social Democrats in July reached an agreement with their former enemies, the Communists, for the establishment of a united front against the Fascist government. Shortly afterwards the radical leaders were able to realize in part their programme for merging in their united front other discontented elements, such as liberals, deserters from the Nazi ranks, and even Catholic trade unionists. Meanwhile the illegal Social Democratic trade unions were resuming their once dominant position in Austrian industry and radical workers were resorting increasingly to strikes and passive resistance in the face of harsh penalties.

Government Dissensions. The reorganization of the forces attached to the principles of the former democratic republic was favored by the schisms within the government, which was split into four

main groups. The Clericals, headed by Chancellor Schuschnigg and supported by a private army called the *Sturmscharen* (Storm Troops), worked in close collaboration with Cardinal Innitzer and the Vatican. Their strongest rivals were Prince Ernst Rudiger von Starhemberg and his Fascist private army, the Heimwehr. The Prince espoused fascism on the Italian model and was a close friend and admirer of Mussolini, from whom he was said to have received funds and armaments for his Heimwehr army. A third group consisted of Catholic workers, led by Herr Winter and Herr Kunschak and organized as the *Freiheitsbund*, who were separated from both Clericals and Fascists by their attachment to democratic principles. A fourth group which was opposed to democracy, clericalism, and fascism of the Italian model alike came to the fore during the year. Composed of members of the former Agrarian and Pan German parties, the so-called National Action or German National party was in close sympathy with Nazi aims, though never formally identified with the Nazi movement. Although lacking a private army, the German Nationalists had powerful support from certain members of the Cabinet, the governors of several of the Provinces, and from Col. Franz von Papen, the German Minister to Vienna.

The conflicts among these groups and their leaders were carried on within the Cabinet and the so-called Fatherland Front created on May 1, 1934, to replace all existing political parties. Prince Starhemberg's nominal leadership of all the private military groups within the Fatherland Front was extended to the regular army of 38,000 men on May 24, 1935, when the army was officially incorporated in the Fatherland Front. (Shortly before the powers had consented to an increase in the Austrian army by 8000 men above the 30,000 limit fixed in the Treaty of St. Germain.) Throughout 1935, however, there were reports of clashes between Starhemberg's Heimwehr and the Catholic Storm Troops, accompanied by evidences of a vigorous struggle between Starhemberg and Schuschnigg for control of the government. On May 26, for instance, Prince Starhemberg announced that the private armies were to be reduced by the dismissal of all members who had joined subsequent to Feb. 1, 1934. The order was ignored by the Catholic Storm Troops and the Catholic workers' *Freiheitsbund*. Most of their members had been recruited after the date mentioned, while the Heimwehr had been organized long before that date. Consequently observance of the order would have left Starhemberg in virtually complete control of Austrian military organizations.

Anti-Hapsburg Laws Repealed. Fearing that Mussolini's absorption in the conquest of Ethiopia would open the way for another attempt by Hitler to win control of Austria, the government on July 10 secured the Federal Assembly's approval of a bill repealing the anti-Hapsburg laws passed in April, 1919. The law removed the restrictions placed upon the residence of members of the Hapsburg family in Austria and provided for the restoration of the confiscated Hapsburg family properties, with certain exceptions. The measure was apparently designed to strengthen the Cabinet's position by placating Monarchists and Catholics and to pave the way for the early restoration of the Hapsburgs in the person of Archduke Otto. This would automatically erect a barrier to Austro-German union.

The immediate result of this move was to

strengthen the position of Vice Chancellor Starhemberg, who had urged eventual restoration of the monarchy with himself as regent. About the same time the Prince announced plans for unification of the various private armies in a national militia, to be dominated by the Heimwehr.

Reorganization of Cabinet. A counter-move by the German Nationalists against Prince von Starhemberg followed soon after. Their spokesman, Governor Rehrl of Salzburg, was reported to have conferred with Chancellor Schuschnigg on August 2 and urged an alliance against Starhemberg and his Italianophile policy. The pro-Germans demanded the right to carry on open propaganda for Austro-German union and to establish their own private army. They wanted the government reorganized on a pro-German basis and all of its anti-German political and economic measures withdrawn. Starhemberg and all his partisans in the cabinet were to be eliminated and a new cabinet formed with Governor Gleissner of Upper Austria as Chancellor. The German Minister, von Papen, strongly supported these proposals. He promised that if they were accepted, the Austrian Nazis would end their efforts to overturn the government by revolution and that the Reich government would grant Austria important economic concessions, including large orders for armaments.

Only the main outlines of the subsequent realignment of forces within the government were clear at the end of the year. At first it appeared as though the pro-German policy was to prevail. The government checked press criticisms of German leaders and institutions, arranged for the resumption of mutual Austro-German radio broadcasts, released a number of Nazi political prisoners, and promised early freedom to Anton von Rintelen. Believing that the wind was blowing against Starhemberg, Maj. Emil Fey, commander of the Heimwehr units in Vienna, entered into negotiations with the German Nationalists and was said to have been promised the War portfolio in their prospective cabinet. At the same time Fey's enemies in the Schuschnigg Cabinet began an investigation into charges that he was implicated in the Nazi *putsch* of 1934.

Prince Starhemberg, however, succeeded in turning the tables on his enemies. In October he reached a settlement with Chancellor Schuschnigg of various issues, particularly those involving Catholic youth organizations, which had long divided the Fascists and Clericals. The two groups then united against the pro-Germans and other opponents in the government. Concentrating detachments of Lower Austrian Heimwehr in Vienna to prevent a coup d'état by Major Fey, the Schuschnigg-Starhemberg factions called a Cabinet meeting on October 17 at which the Chancellor tendered his resignation. President Miklas immediately commissioned him to form a new one and he resumed office with a reorganized Clerical-Heimwehr Cabinet from which Major Fey and his friends were eliminated. Besides Prince Starhemberg as Vice Chancellor, the new ministry included Dr. Egon Berger-Waldenegg (Heimwehr), Foreign Affairs; Maj. Bahr von Bahrenfels (Heimwehr), Interior and Security; Dr. Ludwig Draxler (Heimwehr), Finance; Dr. Robert Winterstein (Catholic), Justice; Dr. Dobretsberger (Catholic), Social Welfare; Fritz Stockinger (Heimwehr), Trade and Transport; Ludwig Strobl, Agriculture; and Dr. Karl Buresch (Catholic), Minister without Portfolio.

The cabinet reorganization left Prince Starhem-

berg virtual dictator of Austria, subject however to the still-powerful influence of the Clericals. He proceeded immediately to unify the various private armies in a national militia under his command, although the Catholic Storm Troops were permitted to retain their former uniforms. At the same time Austria adopted even more openly a pro-Italian policy with respect to League sanctions. The Heimwehr leader in some quarters was charged with scheming to establish himself as Regent and then as King of Austria. In an important speech to the Heimwehr on December 11 he announced that the question of restoration of the monarchy would be subordinated to the creation of "a 100 per cent Fascist state." Throwing down the gauntlet to Hitler and the pro-Germans in Austria, he declared that the question of Pan-Germanism could only be solved under Austrian leadership.

The end of the year thus found little if any improvement in the basically weak position of the Schuschnigg Government. By the cabinet reorganization of October 17 it had made bitter enemies of the German Nationalists, a strong bloc of the Vienna Heimwehr which remained loyal to Major Fey, and the Catholic workers whose leaders had also been ousted from government posts and whose military defense group, the *Freiheitsbund*, was being destroyed. At the same time, the government's efforts to gain the support of the Social Democrats through the unqualified Christmas amnesty extended 154 Socialist political prisoners on December 23 seemed unlikely to succeed. Nazi prisoners shared to a lesser extent in the amnesty proclamation.

Foreign Affairs. With the great powers playing feverishly for high stakes, Austria remained throughout 1935 a key pawn on the European diplomatic chessboard. The rapprochement between France and Italy produced by Hitler's efforts to absorb Austria in 1934 bore fruit in the Franco-Italian agreement of Jan 7, 1935 (see FRANCE and ITALY under *History*). One feature of the agreement was a proposal for a Danubian pact to safeguard Austria's independence against Germany. This proposal received British backing in the Franco-British communiqué of February 3, and at the Stresa Conference, where France, Britain, and Italy reiterated their support of Austria's independence, the Danubian conference was tentatively set for May 20 in Rome.

In preparation for the conference the Foreign Ministers of Italy, Austria, and Hungary, which had established a politico-economic bloc in 1934, met at Venice on May 4-6. Further conversations between Mussolini and Chancellor Schuschnigg were held in Florence on May 11. The Danubian conference was not held during 1935, due chiefly to the break in the Stresa front resulting from Britain's opposition to Italian policy in Ethiopia (q.v.). However the preliminary conversations at Venice and Florence resulted in an agreement by which the Little Entente agreed to an increase of 8000 men in the Austrian army. Austria agreed in return not to insist upon territorial revision or restoration of the Hapsburgs. The subsequent repeal of the Hapsburg Exclusion Law on July 10 produced a furore in the Little Entente states, although the Vienna Government emphatically declared that it did not signify immediate restoration of the monarchy or even the return of Archduke Otto to Austria. The Little Entente again gave warning, however, that their armies would mobilize immediately if any attempt were made to restore the Hapsburgs.

At Geneva on October 11 Austria was recorded

as voting with Hungary and Albania in opposition to the application of economic sanctions against Italy. Early in November when a delegation of Austrian officials visited London to seek an extension of a large credit advanced by British bankers to the government-controlled Credit Anstalt in Vienna they were met with a curt refusal. Several days later (November 12) the Austrian Foreign Minister announced that Austria's position on sanctions had been misunderstood as a negative vote when in fact Austria stood strictly behind the League. About the same time it was learned that the two munitions factories in Austria had been ordered to cease deliveries to Italy. The Austrian Government explained that it was forbidden to export arms under the Treaty of St. Germain. It was well known, however, that secret armament shipments between Austria, Hungary, and Italy had gone on previously with the government's tacit consent, if not active participation.

These developments appeared inconsistent with Prince Starhemberg's recent triumph over the Pro-Germans and other anti-Italian elements. But as the year ended the government-controlled press in Austria gave strong indication that a new turn in Austrian foreign policy was taking place. It was believed that the Vienna authorities, sceptical of Italy's ability to preserve Austrian independence and yet fearful of Germany, was gradually moving under the inspiration of Britain, France, and the Vatican to alignment with the Little Entente. Late in December the International Committee of Creditors of the Credit Anstalt, in which British interests dominated, accepted the Austrian Government's offer to pay about 43 per cent of the outstanding "live claims" of about 180,000,000 schillings. The Christmas amnesty to Socialist political prisoners, vigorous criticism in the Austrian press of Italian policies in the Tirol, and a scheduled visit of Chancellor Schuschnigg to Prague in mid-January, coinciding with the drastic reduction of British claims, were considered significant steps away from Austria's close political understanding with Italy. See CZECHOSLOVAKIA, GERMANY, GREAT BRITAIN, and HUNGARY under *History*; LITTLE ENTENTE.

AUTHORS' LEAGUE OF AMERICA. A national organization of authors, dramatists, and screen writers. It was founded and incorporated in 1912 for the purpose of procuring adequate copyright legislation, both international and domestic; protecting the rights and property of all those who create copyrightable material; advising all such in the disposal of their productions and obtaining for them prompt remuneration therefor; and disseminating information among them as to their just rights and remedies. The league includes the dramatists' guild, the authors' guild, and the screen writers' guild. Closely affiliated with it is the Authors' League Fund, an agency formed by the league to meet its obligations with respect to the care of the sick, the aged, and the unfortunate. The officers in 1935-36 were: President, Marc Connelly; vice-president, Elmer Davis; secretary and treasurer, Luise Silcox. Headquarters are at 9 East Thirty-eighth Street, New York City.

AUTOGIROS. See *AERONAUTICS*.

AUTOMOBILE RACING. The attaining of his goal, that of whizzing along in an automobile at the rate of five miles a minute, by Sir Malcolm Campbell, British sportsman, was the outstanding achievement of 1935 in the motor racing field. Twice within a seven-months span, the Briton piloted his *Bluebird* over a measured mile at bet-

ter time than the world's mark at the start of the year. The 50-year-old driver raced over the sands at Daytona Beach, Fla., in March at 276,816 miles an hour, bettering his previous mark of 272,108. He sailed to England and returned later in the year and on the Bonneville Salt Flats in Utah in September negotiated a measured mile in 11.995 sec. (301.1292 m.p.h.).

Kelly Petillo won the 1935 national championship by virtue of his fine triumph in the annual 500-mile race at Indianapolis on Memorial Day. For that victory, achieved at an average speed of 106.240 miles an hour, the fastest winning time for the event, Petillo gained 600 points towards the championship. He won 290 more points during the year to finish first, ahead of Bill Cummings, 1934 winner of the Indianapolis race and who finished third in 1935, and Wilbur Shaw, runner-up to Petillo at Indianapolis. George MacKenzie won the Eastern States title and Babe Stapp the Midwestern States honors.

AUTOMOBILES. More and more, as automobiles could be improved less and less mechanically, it has been the practice to resort to eye appeal and rely on changing style to stimulate new car buying. Gradually the introduction of new models became an annual event for all makers and coincidental for most—the chosen time for the new announcements was the annual national automobile show in New York in January. As a result the business became decidedly seasonal and with a correspondingly fluctuating employment factor. The winter was the slackest period and the worst time for those out of work to find other employment. With the aim of relieving labor of that hardship and of more nearly stabilizing employment throughout the year, the manufacturers agreed during 1935 to advance the announcements of new models and hold the automobile show, in New York City, during the first week in November, 1935. Local shows throughout the country were likewise advanced with the result that more new cars were sold in November and December than in the corresponding months of any previous year, consequently the year's production was larger than it would have been without this artificial stimulant. This fact must be borne in mind in judging the industry's current recovery from the depression, for the production of 4,182,491 motor vehicles in 1935 was a 46 per cent increase over 1934.

That there were two changes of models during 1935 whereas there will be only the usual one next year, must also be remembered when 1936 figures are analyzed. Many think, however, that the usually heavier spring buying will still be experienced because the replacement market is still far from satisfied, as indicated by the large number of old cars yet in operation.

Since reliability and performance have been more nearly uniform the car makers have vied with each other to set the style. When one was outstandingly successful the succeeding year's offerings showed its influence. This was strikingly evident this year. The Oldsmobile was the fortunate one and the 1936 cars very generally adopted similar lines, particularly in front-end treatment, the narrow high oval grille being found on most of the new cars. Only two cars—the Cord and the Lincoln-Zephyr—were radically original and both were newcomers although products of old manufacturers. The Cord was a revival of an old member of the Auburn line, that had latterly been discontinued. It had a front-drive as before but in an entirely new guise. The

hood has neither lateral taper nor front vertical slope. The two sides were parallel and blended into the vertical rounded front and all around were horizontal louvres resembling blind shutters. The body and fenders were more in the current mode but the roof was only 60 inches from the ground and running boards were entirely absent.

The Lincoln-Zephyr had little external resemblance to the Cord but had two features in common with it—the hood was fixed and the top of it, in one piece hinged at the back, could be lifted to give access to the power plant; the body and frame were consolidated—a practice introduced by Chrysler in the airflow line during the previous year. There was no separate chassis as such and the body-frame members contributed to the structural strength and rigidity of the ensemble to which power plant, drive, wheels, and their suspension were then affixed, instead of first assembling them on a frame to which the body was added.

While there was comparatively little that was new in the new cars as a whole they were considerably improved in appearance, somewhat in convenience and reliability of operation, and decidedly so in comfort. From past experience that diminishing major changes and relative standardization in all but decorative treatment presages a marked departure in practice, many predicted the approach of a revolution in general design. The Cord and Zephyr may be harbingers of such a change and possibly have set examples that will be followed by others, unless the industry goes still more radical and inclines toward the lines of Stout's Scarab announced early in 1935 and refined in exterior lines late in the year. Reversing present practice the engine is at the rear and the luggage and spare tire compartment at the front. The body and fenders are blended into a beetle-like shell from which the car derives its name. This car had no separate chassis frame and was constructed more like an aeroplane fuselage. The passengers were all seated between the axles on seats that can be disposed at will.

All cars now provide baggage space behind the rear seat. Some make it accessible from within the car by hinging the back cushion, but more have a door on the back and opening all the way down, instead of top lids only, as formerly found on the built-in trunks. These spaces generally receive the spare tire also so that external mounting at the rear or in fender wells is unnecessary except where unusual luggage space is required.

The complete all-steel body, i. e. roof included, is now almost universal. Its advent was a blow to radio installations as it did away with the roof antennae, in lieu of which a less efficient mounting under the running boards had to be accepted. Reo, Dodge, Chrysler, and De Soto, however, have insulated the roof section from the rest of the body so that it may be used as the radio aerial.

Nearly all power plants received some refinements but there were no outstanding changes in engines or clutches. Transmissions came in for the most attention. Helical gears were the rule, not only for high and second speeds, but for low and reverse as well. Silent shifting was introduced in nearly all power plants. Overdrives, introduced by Chrysler and Auburn a year ago, were offered by several other makers.

Independent front wheel suspension was continued on the lines that had it previously. Hudson and Terraplane discontinued the option of the axleflex substituting, as standard equipment, an axle trunnioned in the saddles of leaf springs shackled at both ends, and positioned by two radius arms which

take the thrust, including that of steering and braking. The springs being relieved of all but load carrying functions can be softer and more resilient.

Trucks had their best year since 1929 being only 10 per cent under that peak in production and 30 per cent under in dollar volume. The latest models showed the passenger car influence of more attention to style and comfort, and streamlining has added to their appearance, if not to their performance. Safety has had much attention, brakes particularly, so that trucks stop as quickly or quicker than any lighter vehicle. In the past eight years truck accidents have increased only 10 per cent, while passenger car accidents have increased 60 per cent. Bus accidents have declined. Diesel engine powering is being studied by the truck makers and 600 units were put out with such engines in 1935.

Statistics. Preliminary facts and figures released by the Automobile Manufacturers Association placed the total production of passenger cars in the United States and Canada at 3,425,578 and trucks at 756,913. Of the passenger cars 99 per cent were closed models. The wholesale value of cars was \$1,810,000,000 and of trucks \$392,000,000, or a total vehicle value of \$2,202,000,000. Car buyers not only spent 58 per cent more for cars than in the previous year but many bought better cars because the average factory price was \$705 as against \$663 in 1934. The average factory price of trucks showed little change, \$691 instead of \$696. Tire shipments were estimated at 50,000,000 casings. Those sold for replacement on cars in use represented a wholesale value of \$248,000,000—about \$3,000,000 more than the year before. This and a \$530,000,000 increase in retail value of gasoline consumed pointed to a greater use of vehicles, although the gasoline figure was augmented by the increase in number of cars registered. In 1935 the total figure for retail value (including taxes) of gasoline sold was \$3,260,000,000. The wholesale value of parts and accessories for replacement and service equipment was \$565,000,000, so the industry's total business for the year was \$3,015,000,000—a 36 per cent gain over 1934.

Motor vehicles registered were approximately 26,000,000 divided as 22,450,000 cars and 3,550,000 trucks. This was the second year of advance from the previous decline and showed over 1934 a 4¼ per cent gain for cars and a 4 per cent gain for trucks. World registration of motor vehicles was probably 36,500,000; therefore the United States could claim 71 per cent of them. Farmers owned about 18½ per cent of America's passenger cars (4,134,675) and about 25 per cent of the trucks (900,385). Further analysis of the operation of the total trucks in use in the United States showed 780,000 operated in fleets and 28,035 fleets of more than five trucks each. While trucks constituted only 13½ per cent of all motor vehicles they paid 24 per cent of all motor taxes. The sum of truck taxes in 1935 was \$314,000,000. Operation of trucks gave employment to 2½ million drivers and 48,000 communities depended exclusively upon trucks for their service.

Motor buses added nearly 4 per cent to their number, reaching 116,500. Of these 45,000 were in revenue service, 18,380 in local or transit service, 70,500 were used by 23,650 consolidated schools, 12,600 by 190 street railways, and 65 by steam railroads. Buses in city service were operated by 825 companies including street railways.

Again the taxes paid by motor users went up 1 per cent in relation to total taxes collected by Federal, State, and local governments, being 13

where they were 12 per cent in 1934 and 11 per cent in 1933. While there was some increase of gasoline tax rates (see below under *Legislation*) the foregoing comparison is in revenues and means mainly that motor revenues increased more than others. Their total for 1935 was \$1,288,000,000, or 6 per cent over 1934, and included \$804,500,000 of Federal, State, and municipal gasoline taxes. Increase of the latter from the 1934 assessment of \$745,100,000 was nearly 8 per cent, but the gasoline consumption increased nearly 12 per cent, indicating that cars are more freely used in States having lower gas taxes.

The automotive industry is the best customer of many of its supplying industries. Of gasoline it takes 89 per cent of the total consumption, of plate glass 77 per cent, rubber 75 per cent, lubricants 59 per cent, lead 39 per cent, nickel 33 per cent, steel and iron 23 per cent, copper 22 per cent, tin 20 per cent, aluminum 16 per cent, zinc 15 per cent, and lumber and hardwood 8 per cent. Gasoline used by motor vehicles during the year amounted to 16,150,000,000 gallons and lubricants 485,000,000 gallons. The crude rubber that went into vehicles totaled 885,000,000 pounds and cotton for tires 210,000,000 pounds. Of the total freight handled by the railroads, 3,422,000 carloads were automotive.

The retail motor vehicle business considerably improved for at the end of the year there were 39,400 car and truck dealers, nearly 7 per cent more than a year before. Garages, service stations, and repair shops remained about the same—98,169. Total retail outlets, duplications eliminated, were 105,330, a slight decline from the 105,944 in 1934. Wholesalers increased from 5465 to 5932 and retail gasoline outlets from 317,000 to 320,000.

Foreign sales had increased continuously since 1933. In that year they were 29 per cent above 1932. In 1934 they bettered the preceding year by 75 per cent, and in 1935 the gain was 32 per cent. The exports of United States factories combined with the output of their Canadian plants numbered 565,000 motor vehicles. This amounted to 13.6 per cent of the total production.

Legislation. Forty-four State legislatures held regular sessions in 1935 and 15 had special sessions. About 7000 bills were introduced affecting motor vehicle manufacturers, dealers, and users, of which over 1200 were enacted into law. Most of the measures that drew serious opposition from the highway users were defeated; some that were not too popular did pass, but the greater part of the new laws were acceptable at least and many decidedly gratifying. The last may be said especially of those that were aimed toward greater safety.

Specifically in this class were the adoption of financial responsibility laws by five more States—Arizona, Colorado, Ohio, Oregon, and West Virginia—bringing the number of States having such laws up to 26. The District of Columbia was also added to the list by Congress. Colorado, Montana, North Dakota, and Oklahoma established highway patrols, leaving Georgia now the only State without such protection. Seven other States increased their patrol forces. Safety glass was made a requirement for vehicles operated in 15 more States; the total number of such States was 23. In this respect the manufacturers had been rather ahead of the laws, most of them providing safety glass as standard equipment throughout (not simply in windshields where it had been standard for some years) instead of an option at extra cost. Compulsory periodic motor vehicle inspection was

spreading. Five States in 1935 (Colorado, Connecticut, Iowa, Utah, and Vermont) put it on their statute books and many others had it in prospect. Drivers' license laws became more universal. Idaho, Montana, North Carolina, and North Dakota joined the list in 1935 bringing the total number of States having them to 33 and the District of Columbia.

On the adverse side of the legislative picture the principal element was the still upward trend of taxes, however at a declining rate of increase. Bills to increase gasoline taxes were introduced in 32 legislatures in 1935, but were passed in only five States. Connecticut, Delaware, Nebraska, New York, and Pennsylvania each added one cent, but in only two of these were they permanent. The last three States named passed them as emergency measures automatically terminating in one to three years. These were ear-marked for diversion. Most of the proposals for diverting motor vehicle revenue to other than highway purposes were defeated. Colorado reduced its tax rate from 5 to 4 cents a gallon.

Registration fees on the other hand showed a downward trend. Eight states—Connecticut, Minnesota, North Carolina, Ohio, Tennessee, Utah, Vermont, and West Virginia—either reduced fees directly or changed the determining base in a way that effected a reduction on passenger cars. Trucks likewise escaped nearly all of the efforts to increase their fees.

Nor did trucks suffer in any of the revisions of size and weight restrictions made in a few States, for, of the downward revisions, only one went below the dimensional standards of the Uniform Code recommended by the American Association of State Highway Officials and most were even more liberal.

Port of Entry laws are something new to harass interstate commerce. Kansas initiated the type in 1934. It subjected common carriers entering the State to inspection as to equipment, cargo, and overloading; declaration of point of departure, destination, and route to be covered through the State, and exacted a mileage fee therefor before issuing clearance papers. Delaware, Nebraska, New Mexico, Oklahoma, and Maine enacted similar laws in 1935 but few were as drastic. Delaware will not enforce it unless neighboring States adopt such laws, so it seems to be a measure of preparedness. Nebraska's law affects only vehicles carrying petroleum products; Maine's also provides for checking up intrastate trucks to impose the higher fees required if they are overloaded.

Connecticut, Rhode Island, and Delaware joined the States regulating the rates and services of common and contract carriers leaving now only two States that do not. Delaware included private carriers and Colorado, Nevada, North Dakota, and Wyoming amended their motor carrier laws to include some regulation of private operators hauling their own merchandise between cities.

The Federal Government, for the first time, passed a law regulating rates and services of interstate common and contract carriers. Administration is in the hands of a new Motor Carriers Bureau of the Interstate Commerce Commission which has the power also to prescribe regulations of the qualifications and hours of service of drivers, equipment standards, and safe operation of shippers' trucks engaged in interstate commerce, if it finds such regulation necessary. In that event the Act includes the right of the Commission to inspect property, records, accounts, and correspondence.

One other act of Congress was of direct concern to the automotive field—continuation for another year of the excise taxes that were to have expired at the end of 1935. The desire of the Treasury Department to have these made a permanent part of the national taxation system was not granted.

In several States compulsory liability insurance bills were introduced but none were passed. Massachusetts still has the distinction of being the only State having such a law.

What are known as "caravanning" laws were enacted by several Western States. In general they require permits or registrations and the payment of fees for all vehicles driven or towed into or through the State intended to be sold at destination. Arkansas, California, Nebraska, New Mexico, and Texas passed such laws and Nevada a similar law for vehicles towed or carried and Wyoming one applying only to towed vehicles. See INSURANCE.

AVIATION. See AERONAUTICS.

AZERBAIJAN (a'zér-bi-jan') **SOVIET SOCIALIST REPUBLIC.** A republic of the Transcaucasian S.F.S.R. of the Soviet Union. It includes the Nakhichevan Soviet Socialist Republic and the Nagorni Karabakh Autonomous Region. Area, 32,686 sq miles, population (1933), 2,891,000. Baku, the capital, had 709,500 inhabitants; Gandzha, 74,331. During 1933 there were 428,000 students in the elementary and secondary schools, and 12,000 students in 17 institutions of higher education.

Production. The main industry was the production of petroleum (in 1934 the output totaled 19,019,956 tons). Fishing, textiles, copper, salt, and agriculture were important industries.

AZORES, a-zôr' An archipelago 800 miles west of Portugal of which it is a province. Area, 922 sq miles; population (1930), 253,935.

BADEN. See GERMANY.

BAHÁ'Í FAITH. A religion upholding the principle of the oneness of mankind and asserting that the world has entered a new cycle of evolution in which will be established a world order and universal peace. Its Herald was Mirza Ali Muhammad, known as the Báb (the Gate), whose announcement on May 23, 1844, revealed the dawn of the new day. The Báb was martyred in the city of Tabriz on July 9, 1850, by order of the government instigated by Mohammedan leaders. Its Author and Source was Bahá'u'lláh (Glory of God), who ascended in 1892 at 'Akká, Syria, after 50 years' imprisonment and exile. Bahá'u'lláh's eldest son 'Abdu'l-Bahá (Servant of Bahá), the appointed Interpreter and Exemplar of the Faith, promulgated its teachings in the Orient and Occident, traveling through Europe and America between 1911 and 1913. Since 1921, Shoghi Effendi, 'Abdu'l-Bahá's grandson, has been Guardian in accordance with 'Abdu'l-Bahá's testament.

The Bahá'í teachings include spiritual and social principles: the continuity of divine revelation; the identity of aim and spirit in all prophetic religions; the essential harmony of science and religion; abolition of the institution of professional clergy; the spiritual importance of useful daily work; equality of men and women; universal education; and universal peace, based upon the union of peoples and of governments for the attainment of the true purposes of human life.

The administrative order of the faith contains local, national, and international institutions and is regarded by Bahá'ís as the true pattern of world unity. The local community elects annually a spirit-

ual assembly of nine members who are responsible for local Bahá'í activities and welfare. The community also elects delegates to an annual meeting at which is elected a national spiritual assembly of nine members. The national assemblies will in future be electoral bodies for the formation of an international assembly, of which the Guardian will be the chairman. The twenty-seventh annual meeting of American Bahá'ís in 1935 noted the increase of local assemblies from sixty to seventy, and the largest increase in the number of individual believers recorded for any one year.

On August first was completed the external ornamentation of the clerestory section of the Bahá'í House of Worship at Wilmette, Ill., at a cost of \$45,000. During the year important accessions to the literature of the Faith were: *Gleanings from the Writings of Bahá'u'lláh*, *The Bahá'í World*, Vol. V, *The Promise of All Ages*, by Christophil, and *Security for a Failing World*, by Stanwood Cobb. *The Bahá'í Magazine* was combined with *World Unity* under the new title, *World Order*.

The Bahá'í literature of fundamental importance includes: *Gleanings from the Writings of Bahá'u'lláh*, *Tablet of Iqán* (Book of Certitude), *Hidden Words*, and *Tablets*, by Bahá'u'lláh; *Some Answered Questions*, *Promulgation of Universal Peace*, *Tablets*, and *Mysterious Forces of Civilization*, by 'Abdu'l-Bahá; *Bahá'í Administration* and *The World Order of Bahá'u'lláh*, by Shoghi Effendi. Official publications in the United States and Canada are: *World Order*, a monthly magazine, *Bahá'í News*, *The Bahá'í World* (a biennial international record). A national office is maintained at 130 Evergreen Place, West Englewood, N. J. The world centre is at Haifa, Palestine.

BAHAMAS, ba-há'maz. An archipelago of the British West Indies. Area, 4404 sq. miles, population (1934 estimate), 62,679 compared with 59,808 (1931 census). The main islands were New Providence (containing Nassau the capital); Eleuthera and Harbour Island; Andros; Long Island; Abaco, Cat Island, Extuma; Fortune Island Group; Grand Bahama; and Inagua.

Production and Trade. Sponges, shells, tomatoes, pine lumber, and sisal were the principal products. During 1934, exclusive of bullion and specie, imports were valued at £725,480; exports were valued at £148,615. The U. S. A. sent £264,954 of the imports; Great Britain, £182,531; Canada, £135,100. A total of 25,609 tourists landed at Nassau between Dec. 1, 1934, and Mar. 31, 1935.

Government. In 1934-35, revenue amounted to £277,544, expenditure, £276,961; public debt, £180,000. The colony is ruled by a governor who was aided by an executive council of 9, a legislative council of 9, and a representative assembly of 29 members. Governor and Commander-in-Chief, Sir B. F. H. Clifford.

History. During Sept. 27-28, 1935, a hurricane killed 16 people and ruined many houses on Grand Bahama and northeast Abaco; ruined food crops and houses on Little Cayman and Caymanbrac; and destroyed 60 per cent of the houses on Bimini.

BAHRAIN ISLANDS. See under ARABIA.

BAKER, GEORGE PIERCE. An American educator, died in New York City, January 6. He was born in Providence, R. I., Apr. 4, 1866 and was educated at Harvard University, graduating in 1887. He returned to the University in 1888 and became an instructor in English, teaching forensic from 1889 to 1892 and English from 1892 to 1895. In 1905 Baker became full professor of English, a

position he held until 1924. His twenty-year occupancy of the chair of English was notable for his success in teaching the technique of playwriting to his students. He was the first to introduce courses in dramatic writing in his classes, and in 1906 a course in playwriting was added to the curriculum and promising pupils from Radcliffe College and Harvard were admitted to it. These classes were known as 47 and 47a. The students wrote long and short plays which were discussed in class and, if presentable, were produced at Agassiz House at Radcliffe. Their successful production gave added impetus to the Little Theatre movement then in its infancy.

From 1907 to 1908, Mr. Baker was Hyde Lecturer at the Sorbonne, Paris, and during the World War he served on the committee on public information in the United States.

One of the earliest of Mr. Baker's pupils to achieve fame was Edward B. Sheldon, whose play, *Salvation Nell*, was produced by Mrs. Fiske in 1908. The Broadway producers were attracted to the Workshop, and among his pupils who became successful in the theatre were Eugene O'Neill, Philip Barry, Sidney Howard, and Robert Edmond Jones. The success of the playwriting course at Harvard led to the formation of such classes in other colleges throughout the country.

In 1924, Dr. Baker resigned as professor of English at Harvard and the following year accepted the post of professor of history and technique of the drama in the newly-organized department of the drama at Yale and director of the University Theatre there donated by Edward S. Harkness, which was formally opened Dec. 10, 1926. This theatre was fully equipped and to it was attached a staff of dramatists and special directors to teach the elements and technique of playwriting and production. The curriculum included, besides the instruction in playwriting, courses in the history of stage designing and costuming, lighting, criticism, and pageantry. In 1933 Professor Baker retired as head of the Department.

He was the author of *The Principles of Argumentation* (1895, new ed., 1905); *The Development of Shakespeare as a Dramatist* (1907); *Technique of the Drama* (1915); and edited *Specimens of Argumentation* (1893); *The Forms of Public Address* (1904); *Belles Lettres Series*, Section III, "The English Drama"; *Some Unpublished Correspondence of David Garrick* (1907); *The Correspondence of Charles Dickens and Maria Beadnell*; also, various Elizabethan plays; *Plays of the 47 Workshop*, series I-IV; *Yale One-act Plays*, I; *Yale Long Plays*, 4 vols. In 1921 he wrote and directed the *Pilgrim Spirit*, Massachusetts Tercentenary Pageant, produced at Plymouth, Mass., during July and August of that year.

BALI. See NETHERLAND INDIA.

BALKAN ENTENTE. A bloc of Balkan states—Greece, Rumania, Turkey, and Yugoslavia—which by the treaty of Feb. 9, 1934, mutually guaranteed their frontiers against aggression by any of the Balkan states. The treaty pledged the four governments to undertake no political action and assume no political obligation toward any Balkan country not a signatory of the pact without the consent of the other contracting parties. In general they agreed to adopt a unified foreign policy on intra-Balkan issues. The entente represented an effort to stabilize the territorial *status quo* in the Balkans and at the same time to free the Balkan states of their traditional diplomatic

dependence upon the great powers. At the fifth conference of the Foreign Ministers of the Balkan Entente held at Bucharest May 10-11, 1935, they consented to the limited rearmament of Hungary and Bulgaria, provided these two countries accepted the territorial *status quo*. They also joined forces with the Little Entente (q.v.) in declaring they would regard any move toward restoration of the Hapsburgs in Austria or Hungary, or both, as a breach of the peace treaties. In October the Balkan Entente gave strong support to the application of League sanctions against Italy. See GREECE, RUMANIA, TURKEY, and YUGOSLAVIA under *History*.

BALKAN STATES. The states of the peninsula south of the Danube, and bounded by the Adriatic, Ægean, and Black seas. See ALBANIA, BULGARIA, GREECE, RUMANIA, TURKEY, and YUGOSLAVIA.

BALTIC ENTENTE. A bloc comprising the three Baltic states—Estonia, Latvia, and Lithuania—established in 1934 for the joint protection of their mutual interests. By a treaty signed Sept. 12, 1934, and which went into effect November 30, the three governments agreed to cooperate on all matters of foreign policy, to confer together at least twice annually, to settle their mutual disputes peacefully, and to establish closer cooperation among their diplomatic representatives abroad and at international conferences. All three states had previously concluded non-aggression pacts with the Soviet Union. See ESTONIA, LATVIA, and LITHUANIA under *History*.

BANGKA. See NETHERLAND INDIA.

BANG'S DISEASE. See DAIRYING

BANKERS ASSOCIATION, THE AMERICAN. The dominant national organization of banks in the United States, having a membership of about 12,000 banks out of a total of 15,500. Its four major divisions are devoted to the special interests, technical advancement, and general welfare of the following classes of banks. National, savings, State, and trust company. There also are two sections devoted to general banking interests, the American Institute of Banking section and the State secretaries section. The former, which is the educational arm of the organization, has an enrollment of 36,000 students from banks in all parts of the country and a general membership of 65,000; the latter forms a link between the national organization and the 48 State bankers' associations.

The association's protective department prosecutes continually a nation-wide campaign of prevention, protection, and investigation for all member banks in respect to criminal operations. It also has a legal department which keeps bankers informed on developments in the field of banking law, while its State and Federal legislative committees and councils attempt to safeguard the interests of banking institutions and the public in both State and Federal banking legislation.

Through its economic policy commission and other special bodies the association conducts studies of such subjects as insurance and guaranty of bank deposits, the entry of the Federal government into banking activities, branch banking, causes of bank failures, proposed remedial legislation, supervision of the dual banking system under State and national charters, bank chartering policies, and basic changes in bank credit conditions and methods. Its public education commission conducts lectures on banking in public and private schools and before civic clubs throughout the United States, and its bank management commission develops active tech-

nological studies and methods for more scientific bank management.

The association held its 1935 convention in New Orleans, La., November 11-14. The chief topics of discussion were coöperation with the Federal government (the association having taken the lead in bringing banks into close practical coöperation with government housing and other measures), the need for the retirement of the government from fields of private enterprise, government fiscal policies, and general taxation. The national officers elected for 1935-36 were: President, Robert Vedder Fleming, president, Riggs National Bank, Washington, D. C.; first vice president, Tom K. Smith, president, Boatmen's National Bank, St. Louis, Mo.; second vice president, Orval W. Adams, vice president, Utah State National Bank, Salt Lake City, Utah; and treasurer, Arthur B. Taylor, president, Lorain County Savings and Trust Co., Elyria, O. National headquarters are at 22 East 40th St., New York City; Fred N. Shepherd, executive manager.

BANK FOR INTERNATIONAL SETTLEMENTS. See INTERNATIONAL BANKING.

BANKHEAD-JONES ACT. See AGRICULTURAL EXPERIMENT STATIONS.

BANKING ACT. See UNITED STATES under Congress.

BANK NOTES, NATIONAL, EXTINCTION OF. See UNITED STATES under Administration.

BANKS AND BANKING. If it had not been for the pressure of government financing, the year 1935 would probably be regarded as marking a decided turn for the better in the banking situation, as viewed historically from the standpoint of the panic and depression ensuing upon the year 1929. The year 1934 witnessed the completion of the major elements in the programme of bank reorganization which had followed after the banking holiday of 1933. While statistics have been very sparingly published with regard to bank failures, the data made public shortly before the end of 1934 showed the closing or disappearance of some 2500 banks during the years 1933-34 inclusive, while with the opening of 1935 the number of closings and mergers began to decline. During the year there was a slight indication of improvement in commercial banking business, and at some banks the daily routine began to take on a more normal complexion.

What with the reduction of bank failures and the moderate turn for the better in general business demand, the fact that banks almost uniformly showed small earnings or even a negative earnings position for the year 1935, was to be reckoned as of secondary importance. The real problem in connection with banking in 1935 was furnished by the fact that there had been no indications of a lessening of government requirements, but, on the contrary, there was every reason to think that the policy of putting government securities into the hands had by no means run its course. While the Banking Act of 1935, adopted in August, introduced several important innovations, it in the main merely improved and continued, in its final form, the legislation that had been undertaken in 1933; and while the President retained the power to devalue the dollar still further, no such step was taken.

This fact and the action of the Supreme Court in the so-called "gold decisions" of Feb. 18, 1935, which, on the whole, although somewhat hesitatingly, confirmed the action of Congress and the administration in changing the weight of the dol-

lar, tended strongly to confirm the opinion that the "New Deal" monetary policy had largely run its course—certainly for the present—and strengthened the community in the belief that business conditions were now for the first time more or less stable and hence to be moderately counted upon. Relationships with foreign countries, however, continued uncertain and the year witnessed no progress in international monetary stabilization or in the approximation of the American banking system to those of other countries in the matter of credit policy. The Act of 1935, although it introduced some important changes in the structure of the Reserve system itself, had not come into final working order during the twelve-month of 1935 but still remained as a factor in the future reconstruction of the Reserve system, its administrative provisions going into operation during the first weeks of the new year, 1936.

The experience of the national banks after 1932 had largely deprived them of any exceptional prestige or standing that they might formerly have possessed. Recognizing this fact, the administration became more than ever convinced that the restoration of the national banks to their older position was dependent upon making them obviously "sound" and "safe." The result of this feeling was the incorporation into the first draft of the Banking Act of 1935, which made its appearance about mid-winter (Feb. 18, 1935), of provisions calling for the improvement of the Federal Deposit Insurance Fund, in which the national banks were, of course, compulsory members. As finally adopted, considerable modification of these provisions of the law took place, but the outcome of the discussion was to limit the insurance of bank deposits to accounts of not to exceed \$5000, while the rate at which contributions were to be made was fixed at $\frac{1}{2}$ of 1 per cent upon demand deposits.

The question whether State banks should be compelled to comply with these requirements as well, was discussed throughout the first half of the year, and finally resulted in the provision that such State institutions should be deprived of membership in the Reserve system unless before the end of 1937 they took out insurance under the proposed insurance fund. This is evidently an indirect use of the Reserve system to compel State banks to assume the same burdens which had been imposed upon the national institutions, and was correspondingly unpopular. A considerable number of national banks left the system but their place was taken by others, so that at midyear, it was 5425 strong, as against a membership of 5417 at the opening of the fiscal year (July 1, 1934). From time to time utterance was made by the President and other members of the administration, who reassured the public concerning the condition of the national banks, furnishing expressions of opinion that in absorbing the current deficit of the government the banks were not going too far. Frequent exhortations to lend more freely and to be more helpful to the community continued to be directed toward all of the banks, but particularly toward those possessing national charters. As the year drew to a close, controversy over banking conditions became sharper, and the meeting of the American Bankers Association in New Orleans, at about the end of November, was characterized by bitter debate, unusual at the meetings of the Association, which in years past had usually presented a "cut and dried" character.

In the following table is shown the situation of the national banks at mid-year during the past few seasons. The figures show an advance in deposits, largely due to the loans made by the national institutions upon government bonds growing out of the inflation of an unbalanced Federal budget, while they also show the continued growth of excess reserve deposits at Reserve banks.

institutions was toward the working out of new lines of business calculated to afford a better field for the activities of the State banks by eliminating those branches of activity which had been largely occupied by the government itself and had thus become unprofitable. In a carefully compiled report submitted by a special committee of the New York State Bankers Association at the annual

CHANGES IN NATIONAL BANK POSITION (IN THOUSANDS OF DOLLARS)

	June 30, 1930	Per cent in- crease (+) or decrease (—) since June 30, 1929	June 30, 1931	Per cent in- crease (+) or decrease (—) since June 30, 1930
Demand deposits	\$10,926,201	+ 4.02	\$10,105,885	— 7.50
Time deposits	8,752,571	+ 5.24	8,579,500	— 2.09
Loans and discounts *	14,887,752	+ 0.59	13,177,489	— 11.05
United States and other bonds, stocks, etc.	6,888,171	+ 3.48	7,674,837	+ 11.42
Lawful reserve with Federal Reserve banks ..	1,421,676	+ 5.70	1,418,096	— 0.25
	June 30, 1932	Per cent in- crease (+) or decrease (—) since June 30, 1931	June 30, 1933	Per cent in- crease (+) or decrease (—) since June 30, 1932
Demand deposits	\$ 7,940,653	— 21.42	\$ 7,880,836	— 0.75
Time deposits	7,265,640	— 15.31	6,199,806	— 15.29
Loans and discounts *	10,281,676	— 21.20	8,101,647	— 20.23
United States and other bonds, stocks, etc.	7,196,652	— 6.24	7,358,392	+ 2.25
Lawful reserve with Federal Reserve banks	1,150,175	— 18.89	1,412,127	+ 22.78
	June 30, 1934	Per cent in- crease (+) or decrease (—) since June 30, 1933	June 30, 1935	Per cent in- crease (+) or decrease (—) since June 30, 1934
Demand deposits	\$ 9,280,929	+ 17.77	\$11,296,760	+ 21.72
Time deposits	6,891,128	+ 11.15	7,246,147	+ 5.15
Loans and discounts *	7,694,749	— 5.02	7,365,226	— 4.28
United States and other bonds, stocks, etc.	9,348,553	+ 27.04	10,716,386	+ 14.63
Lawful reserve with Federal Reserve banks	2,497,400	+ 67.54	3,092,178	+ 23.81

* Includes rediscounts and customers' liability under letters of credit

State Banks and Trust Companies. The banking holiday had left many State banks and trust companies in a difficult situation and the Reconstruction Finance Corporation had devoted itself steadily during the latter part of 1933 and throughout 1934 to the upbuilding of the institutions which had been thus weakened, by putting in their hands fresh capital against the issue of preferred stock. In this way many State banks and trust companies had been saved from the necessity of closing and had been retained as units in the systems to which they belonged.

The opening of the year 1935 in the case of the State institutions, as in that of national, found the general attitude and tone of the community improved, although in the course of the year there had been a reduction in the total number of banks which amounted to 57, all but one of which were State institutions. These were all licensed institutions. The total number of non-licensed banks (all State institutions) placed in liquidation or receivership during the year 1934 had been 927, of which 506 were non-member State institutions. The year 1935 saw a great decline in this total, and only 30 licensed State institutions and 48 non-licensed were placed in receivership.

On the whole, the general tendency of State

convention of the association in June, 1935, such a shifting of the basis of banking was recommended as a deliberate policy, and a like point of view had been developed in various other States. During the year, the Federal Deposit Insurance Corporation began an effort, authorized by the Banking Act of 1935, adopted in August, to strengthen the general structure of banking by eliminating from it through liquidation and merger, institutions which it believed were not as strong in their capital structure as was desirable.

The midyear reporting period (end of June) found the total number of banks in existence reduced to 15,990 as against 16,024 at the last preceding reporting date; while during the latter part of the year bank closings and retirements from the Reserve system reduced both the aggregate number of banks and the number of members. Losses were particularly noteworthy among national banks and were aggravated during the latter months of the year by the fact that not a few national institutions surrendered their charters and entered the State systems. On the whole, the year's development tended quite strongly toward the shifting of banks into State systems and the emphasizing of trust operations as compared with commercial, while the year also had the effect of

RESOURCES AND LIABILITIES OF ALL REPORTING BANKS OTHER THAN NATIONAL

[In millions of dollars]

	1927	1928	1929	1930	1931	1932	1933	1934	1935
Loans	23,348	24,397	26,575	25,572	21,987	17,792	14,260	13,723	13,044
Investments	10,861	11,624	10,692	11,056	12,385	11,026	10,599	11,940	13,500
Cash	643	572	521	523	515	453	384	361	379
Capital	1,902	1,931	2,169	2,145	1,982	1,748	1,383	1,498	1,521
Surplus and undivided profits	3,130	3,394	3,742	3,986	3,865	3,212	2,841	2,706	2,581
Deposits	32,893	33,544	34,316	33,885	34,666	27,929	24,759	26,692	29,067
Resources	41,550	43,066	44,732	44,903	42,566	34,877	30,441	32,258	34,331

confirming in the State banks, as in the national, the tendency to give a place of preponderating importance to government bonds in the portfolios of the different institutions. The table at the foot of page 70 presents the salient features in the trust company development

National Banks. National banks had not shown material difference in development as compared with State and private institutions during the past few years, nor had they since the beginning of the depression given evidence of that superior strength and soundness which had been customarily attributed to them. The year 1935 was chiefly interesting in their growth for the continuous absorption by the national banks, at the request of the Treasury Department, of large quantities of government notes, bills, and bonds, and, at the same time, for the final organization of the Federal Deposit Insurance Corporation, entrusted with the mission of guaranteeing the deposits of the national banks and of such State banks as might choose to adhere to the Federal Reserve system

The adoption of the Banking Act of 1933 had given the signal for the installation of two so-called systems of funds designed for the guaranty of bank deposits—the first, the so-called “temporary fund”; the second, the “permanent fund”;—the first intended to apply to deposits below \$5000 and the other intended to provide for all deposits. From the beginning of the year, it was the demand of the banks and especially the national banks that this situation should be modified and that the so-called permanent fund when it came into definite existence should be limited to deposits of \$5000 and under,—the larger deposits being thus left to take care of themselves unless their owners chose to break them up into a series of accounts not one of which was in excess of \$5000 balance

Fearing that no such modification of the act would be possible, not a few national banks withdrew from the Reserve system and gave up their charters, while still others have made all necessary preparations to go out of the system. The final adoption of the modified depositors' guaranty provision, in August, relieved these apprehensions and left the banks in very much the same position as before, with a tax of $\frac{1}{2}$ of 1 per cent levied upon the net deposits of all contributing banks, regardless of the average size of their deposits,—the Federal Deposit Insurance Corporation assuming the liability of deposits of \$5000 or less in the event of failure. This action served to hold the national banks practically in status quo, and the close of the year found them only moderately altered in numbers.

Another outstanding feature of the year was the announcement of the Treasury's intention to retire the national bank notes which were still outstanding, amounting to some \$680,000,000, by the use of a corresponding amount drawn from the “profit” which had been made by the devaluation of the dollar. This operation was carried through and the national bank notes disappeared as a factor in American currency. Their place was taken so far as currency was needed, by issues of Federal Reserve notes. With this change the national banks still further lost their distinguishing characteristics and became, in effect, identical with the State institutions which were members of the Federal Reserve system. The major statistical changes occurring in national bank portfolios dur-

ing 1935 are presented in the accompanying table (000,000 omitted).

MAIN ASSETS AND LIABILITIES OF REPORTING MEMBER BANKS [000,000 OMITTED]

<i>Assets</i>	<i>Dec 31, 1935</i>	<i>Net change since Dec. 24, 1935 Jan. 2, 1935</i>	
Loans and investments	\$20,895	— \$ 41	+ \$1,413
Loans to brokers and dealers.			
In New York City	980	+ 62	+ 223
Outside New York City	183	+ 12	+ 7
Loans on security to others (except banks)	2,111	.	— 148
Acceptances and commercial paper bought	362	+ 6	— 88
Loans on real estate	1,136	— 4	—
Loans to banks	76	.	— 47
Other loans	3,401	+ 9	+ 187
U. S. Govt. direct obligations	8,468	— 148	+ 697
Obligations fully guaranteed by U. S. Govt	1,126	— 5	+ 485
Other securities	3,052	+ 24	+ 97
Reserve with Fed Res banks	4,597	+ 131	+ 1,379
Cash in vault	369	— 17	+ 48
Due from domestic banks	2,309	+ 63	+ 336
<i>Liabilities</i>			
Demand deposits—adjusted	13,888	+ 103	+ 2,474
Time deposits	4,911	+ 28	+ 101
Government deposits	701	— 4	— 736
Interbank deposits			
Domestic banks	5,350	+ 61	+ 883
Foreign banks	443	+ 5	+ 304
Borrowings	1	— 4	—

+ Increase. — Decrease.

Federal Reserve Notes. The year 1935 brought little change to the actual operations of the Federal Reserve system. Actual rediscounting from members continued to be small and even reached a new low point, some increase in the industrial discounting activities of the Reserve banks took place but these operations were always unimportant and continued to be so. The large portfolio of government securities, amounting to \$2,430,000,000, which Reserve banks had been carrying during the year, was maintained intact, notwithstanding continuous discussion as to the best method of getting rid of these frozen assets

The table on page 72 reflects the status of the twelve Reserve banks at the close of the year as compared with the corresponding status a year earlier.

Discount policies remained practically stable throughout the entire year 1935. The constant pressure for easy money applied by the Treasury in the effort to keep the cost of its own financing down to a very low level had been reflected in the action reducing the rate at the Federal Reserve Bank of New York to $1\frac{1}{2}$ per cent, while other Federal Reserve banks had followed the New York example by cutting their rates at various dates during the spring of 1935. At the close of the year no rate for ordinary rediscounts at Federal Reserve Banks was above 2 per cent, with New York and Cleveland at $1\frac{1}{2}$ per cent each. The low rates, however, did not stimulate the growth of member bank borrowing; and during the year, although a feeble upward trend was observable, the aggregate of business paper for the close of the twelve-month was only about \$3,400,000,000 at reporting member banks,—a slight advance of less than \$200,000,000 above the status of a year previous. Loans to brokers continued low and at the end of the year were around \$850,000,000, a gain of only about \$25,000,000 during the twelvemonth, notwithstanding that there had been very decided activity in the stock market.

Nevertheless, the great upswing in the turnover of the stock market led during the autumn months

COMBINED STATEMENTS OF TWELVE FEDERAL RESERVE BANKS

[In thousands of dollars—000 omitted]

RESOURCES			
	Dec. 31, 1935	Dec. 24, 1935	Jan. 2, 1935
Gold certificates on hand and due from U.S. Treasury	\$ 7,553,357	\$ 7,553,849	\$5,124,339
Redemption fund—Federal Reserve notes	17,444	17,563	19,060
Other cash	264,550	219,896	253,091
Total reserves	7,835,351	7,791,308	5,396,490
Redemption fund—Federal Reserve bank notes .....	.....	.....	1,677
Bills discounted:			
Secured by U.S. Government obligations, direct and (or) fully guaranteed	1,541	3,782	3,544
Other bills discounted	3,131	3,373	3,548
Total bills discounted	4,672	7,155	7,092
Bills bought in open market	4,656	4,657	5,612
Industrial advances	82,493	32,600	14,315
U.S. Government securities:			
Bonds	216,176	216,172	396,088
Treasury notes	1,641,597	1,641,597	1,507,118
Treasury bills	572,958	572,958	527,475
Total U.S. Government securities	2,430,731	2,430,727	2,430,681
Other securities	181	181	.....
Total bills and securities	2,472,733	2,475,320	2,457,700
Due from foreign banks	665	665	805
Federal Reserve notes of other banks	27,445	22,010	27,988
Uncollected items	603,789	602,470	530,474
Bank premises	47,723	50,395	49,160
All other assets	38,094	38,732	44,534
Total assets	\$11,025,800	\$10,980,900	\$8,508,826
LIABILITIES			
Federal Reserve notes in actual circulation	\$ 3,709,074	\$ 3,768,480	\$3,215,661
Federal Reserve bank note circulation—net .....	.....	.....	26,363
Deposits:			
Member bank—reserve account	5,587,208	5,429,284	4,089,552
U.S. Treasurer—general account	543,770	614,255	125,594
Foreign bank	28,935	32,850	18,954
Other deposits	225,896	233,240	170,971
Total deposits	6,385,809	6,309,629	4,405,071
Deferred availability items	591,556	555,054	527,887
Capital paid in	130,512	130,469	146,773
Surplus (Section 7)	145,772	144,893	144,893
Surplus (Section 13 b)	24,233	23,797	8,418
Reserve for contingencies	34,869	30,698	30,816
All other liabilities	3,975	17,970	2,946
Total liabilities	\$11,025,800	\$10,980,900	\$8,508,826
Ratio of total reserves to deposits and Fed. Res. note liabilities combined ..	77 6%	77 3%	70 8%
Contingent liability on bills purchased for foreign correspondents ..	.....	.....	\$671
Commitments to make industrial advances	\$27,649	\$27,745	\$10,213

to continuous consideration by the governing authorities of the Reserve system of the question,—whether some kind of “credit control” ought not to be applied. Ever since the beginning of 1934 there had been a tendency on the part of member banks to carry with Reserve banks very much larger balances than were required by the provisions of law. These so-called “excess reserves” had, by the close of November, reached the enormous sum of about \$3,000,000,000, and there was widespread opinion to the effect that they constituted a menace, as they evidently provided an existing fund of credit which could be drawn without further application to or permission of the various banks by those who were desirous of financing large stock market operations. Fears under this head gave rise to lengthy consideration of the subject at meetings of the Board of Governors and of the Open Market Committee of the system in Washington, and finally led to the publication of a statement of opinion by the Governor of the Federal Reserve Board in which he expressed the view, there was nothing that could or should be done in connection with the control of credit for the time.

The Banking Act of 1935, adopted August 19, had authorized the raising of Reserve requirements to not over double the then existing level. The proposal to have the Board take some action under this grant of authority was particularly dis-

tasteful to the governor of the Reserve Board, in the statement already referred to he described it as being a useless and undesirable remedy. After the publication of his statement, the Advisory Council of the Federal Reserve system passed a resolution requesting that the Federal Reserve Board direct Reserve banks to reduce their line of government securities but with the general understanding that both the governor of the Reserve Board and, indeed, the Board itself was opposed to permitting any such action to be taken. General uncertainty in the Federal Reserve system prevailed throughout the latter part of the year due to the fact that the act of revision adopted in August had provided for terminating the service of the old members of the Federal Reserve Board, early in 1936;—they to be succeeded by a new Federal Reserve Board taking office on the first of March, the Secretary of the Treasury and the Comptroller of the Currency being, by law, dropped from membership in the governing body.

Bank Credit. As we have fully noted, there had been continuous political urgency to have the banks lend more freely and more cheaply; and nearly all of the higher government authorities had been steadily preaching the necessity of more credit and the ease with which the banks could relieve the situation by enlarging the accommodations which they hoped to extend. Total deposits on the books of the banks continued to grow larger

as a result of the action of the Treasury in discounting more and more paper which were paid for by the writing up of bank credit on the books of the member institutions. As a result it was noted with satisfaction by politicians that the average deposit level had been forced back to about the same point as was reached prior to the panic of 1929; but critics of every kind were quick to observe that these "deposits" were nothing more than the book representatives of government bonds and had no relation whatever to the volume of business likely to be developed.

On the other hand, the credit extended by government institutions of all sorts, of which some 25 had now been brought into existence, with 17 reporting monthly considerable amounts as periodically shown in the Federal Reserve Bulletin, was steadily enlarged, and toward the end of the year amounted to fully \$13,000,000,000.

The President of the Reconstruction Finance Corporation, in addressing the American Bankers Association at the annual convention at New Orleans about the end of November, took occasion to deny that there was any desire on the part of the government to remain in the banking business although he admitted that at that time the government was the proprietor of preferred stock in some 6000 institutions. This stock, said Mr. Jones, could be paid off at any time the banks felt disposed. He, however, later issued a letter to banks in which he explained that he had not meant to suggest or urge the early payment of the stock; indeed, that the various institutions could take their own time about it. Toward the close of the year, the question became more and more acute in many minds, whether in fact the "left wing" of the administration had not definitely determined upon a policy of "socialization of banking." The close of the year thus found the general credit position in greater confusion than had been the case for several years.

Bank Failures. With the advent of the Federal Deposit Insurance Corporation, the subject of bank failures had become a very sore one in administrative circles. The managers of the Insurance Corporation were naturally desirous of forestalling such failures and thereby easing the possible strain that might be brought to bear upon the insurance enterprise, while they, of course, felt keenly the aspersions directed against the Insurance Corporation when failures occurred. The year 1935 had produced comparatively few failures, the total number reported by the Reserve System up to the end of the year being 29; but it was well understood that numerous institutions that might otherwise have closed, had been prevented from doing so by issues of second preferred stock or enlargements of the preferred stock which they already had outstanding. Effects among the State systems to "clean up" local banking systems resulted in many cases in closing certain banks, although in the case of others "mark-ups," rendered possible by the fact that in 1932 assets had been too severely marked down, gave sundry institutions a false appearance of prosperity. These "mark-ups" in certain cases brought about a rise of the current quotation of the stock of the bank,—a phenomenon which was not very carefully analyzed by the public, and thus led some to the erroneous belief that conditions were growing "more prosperous."

Late in 1935 the Federal Deposit Insurance Corporation initiated a "drive" to bring about the extinction through mergers or combinations of

"weak" banks throughout the country, a policy which placed unnecessarily severe pressure on not a few of the smaller institutions. Although the advance of securities and particularly of second grade bonds during the year improved the balance sheet position of a considerable number of banks, it could not be said that during the twelvemonth there had been any very genuine improvement in banking conditions generally; while the steady growth of the enormous burden of government bonds and other securities in the different institutions, instead of producing the much desired liquidity, had merely made these institutions wholly dependent upon the financing of the Federal government.

International Relationships. International banking has been fully discussed elsewhere (see INTERNATIONAL BANKING). Here we need only note the general changes in the world position of the banking system itself. The year 1935 was a continuation of the anxieties and doubts that previously existed with regard to monetary relationships all over the world, so that both banks and large business houses were less and less willing to maintain balances in foreign trade, expressed in terms of the local currencies of those countries. This unwillingness created a distinct instability of relationship which grew more severe as time went on, and as the apparent danger of devaluation or suspension of specie payment by countries of the "gold bloc" increased.

Foreign financing in the United States, for reasons already sufficiently rehearsed, became less and less frequent, while foreign branch banks, owned by American institutions continued to be closed, either due to political changes abroad or lack of profit, or exchange fluctuations. A like tendency was witnessed with regard to the operations of branches established by foreign banks in New York. The movement of foreign funds toward the United States, as already elsewhere noted, continued active, being reflected in the enormous movement of gold into the United States, which for the year ran well up above \$1,887,000,000; while heavy purchases of American stocks for foreign account continued to take place.

During the last quarter of the year the total amount of foreign buying in the New York market was often as much as 10 or 12 per cent of the entire business on specified days. Further application of the silver buying policy of the government first resulted in forcing up the price of domestic silver to a high level of 77 cents an ounce, while the influence of Treasury buying in the foreign market advanced the price of foreign silver to about 67 cents an ounce. Early in the year the application of the price of silver had driven Mexico off the silver standard, while later on it was the motivating cause of a substitution of a managed paper currency on the coast of China. The currency disorders occurring in various parts of the world as a result of American silver buying led, just at the close of the year, to a suspension of purchasing on the London market and the statement that the Treasury would henceforward confine its purchases to silver-producing countries. This reversal of policy did not, however, bring about any satisfactory improvement in the bullion market, which continued to be disturbed and irregular up to the close of the year, with unaccountable fluctuations which resulted only to the advantage of the speculative elements.

Discussion and Criticism. During the first half of the year the major foundation for discus-

sion of banking conditions was furnished by the so-called Eccles bill, reference to which has already been made in the present article in various connections. The Eccles bill had not only broadened and confirmed the Federal Deposit Insurance system, altered to some extent the management of the Reserve system, and changed the conditions of rediscounting, but it also revealed the general banking policy of the administration of the nation, as had never been done before. It revealed the so-called "New Deal" as a scheme for continuous inflation and an attempt at control of prices through banking manipulation, one incidental end being the appropriation of large fortunes and the making of gifts and inheritances so expensive as to be hardly worthwhile (see PUBLIC FINANCE).

The failure of the act to pass in its original form was reached only after a bitter discussion, most of it behind the scenes, in which the Roosevelt administration came to realize that it had gone too far and that it must take a less advanced position. The best thing about the controversy was the fact that it tended to focus the attention of the banking community upon various phases of existing financial organization which had previously had much less study than they were entitled to, and one result of the debate was the revival of an interest in banking conditions which had seemed to be almost dead during the preceding two years. The extraordinarily submissive attitude which had been forced upon the banks ever since the holiday in 1933 seemed to be ended, and during the autumn months conspicuous bankers turned their attention to the question whether the policy of the Treasury Department and its effort to transfer the whole national deficit to the banks was not likely to prove dangerous—even suicidal.

Stabilization Fund. As has been noted in former issues of the YEAR BOOK, Congress had provided for a Stabilization Fund, by the act of Jan. 30, 1934, and this Stabilization Fund had been tentatively used for the purpose of controlling exchange. The year 1935 witnessed a considerable expansion and enlargement of its operations along the lines of the British Equalization Fund. Pressure on the French franc made itself definitely felt in the very early spring of 1935 and was followed by a change of front on the part of the Treasury, the Stabilization Fund being continuously used for the purpose of bolstering the franc and assisting the Bank of France to supply gold. Similar application of the services of the fund have been in connection with the troubles in Belgium, especially for the purpose of easing the transition of Belgium to a new standard of value, which occurred in the early spring. The Stabilization Fund was also employed in the effort to keep the British pound sterling high at a figure just below \$5, and at a quotation that varied only slightly from day to day.

Originally Congress had limited the operation of the Stabilization Fund to two years, which would have ended it on Feb. 1, 1936, but as the close of the year 1935 drew near, it became more and more evident that the politicians had made up their minds to secure a further extension of it. The public began to reckon with it then as a more or less continuing element in Federal monetary policy and to expect of it the smoothing out of exchange fluctuations such as might occur from month to month. As no accounts of the operation of the fund were ever published, the year 1935 end-

ed with the general status of the undertaking still obscure to the rank and file of financial authorities.

BAPTIST CONVENTION, NORTHERN. This body of the Baptist denomination, according to the *Annual of the Northern Baptist Convention*, was composed in 1935 of 36 conventions in 33 States, the District of Columbia, and Puerto Rico. It reported 406 local associations, 7741 churches, nearly 9000 ordained ministers, 59,067 baptisms during the year, 1,480,231 members, 6272 Sunday schools, and 1,131,927 Sunday school pupils. Church property was valued at \$218,473,366. The contributions for current expenses amounted to \$12,926,668, and for beneficence to \$3,069,397.

The twenty-eighth annual meeting of the Northern Baptist Convention was held in Colorado Springs, Colo., June 20-25, 1935. Its general theme was "I Am Recreating All Things," the keynote address being delivered by the Rev. Avery A. Shaw, D.D., president of Denison University. The officers elected for 1935-36 were: President, the Rev. James H. Franklin, D.D., president of Crozer Theological Seminary; first vice-president, Rev. Gordon Palmer, D.D. Pomona, Calif.; second vice-president, Mrs. Jessie Burrall Eubank, Cincinnati, Ohio; corresponding secretary, the Rev. Maurice A. Levy, D.D., Williamsport, Pa.; recording secretary, the Rev. Clarence M. Gallup, D.D., New York, N. Y.; and treasurer, Orrin R. Judd, New York, N. Y.

In 1935 the Northern Baptist Convention maintained 64 educational institutions, including 10 theological seminaries, 6 training schools, 19 colleges, 10 junior colleges, 12 academies, and 7 Negro schools. These institutions had 32,667 students, 2924 instructors, 738 buildings, property aggregating \$111,324,686 in value, endowments valued at \$161,100,885, and an annual income for the year of \$18,683,266. The leading denominational papers were *Baptist Banner* (Parkersburg, W. Va.); *Baptist Observer* (Indianapolis); *Baptist Record* (Pella, Iowa), and *Watchman-Examiner* (New York, N. Y.).

The foreign mission field of the Northern Baptist Convention included Assam, Burma, South India, Bengal-Orissa, South China, East China, West China, Japan, Belgian Congo, and the Philippine Islands, with 610 missionaries. In 1935, churches numbered 3226 with 352,413 members; native workers, 10,529; Bible schools, 2916 with an enrollment of 119,351 pupils; and hospitals and dispensaries, 84. The field of the home mission societies included, in addition to the United States and its dependencies, Mexico, the West Indies, Central America, the Canal Zone, and South America. Their greatest activity was among the Negroes, Indians, and new Americans. The denomination also maintained 7 hospitals, the largest being the New England Baptist Hospital in Boston and the Northwestern Baptist Hospital in St. Paul, 16 homes for the aged, and 15 children's homes.

Headquarters of the General Council, the executive body to which is entrusted the work of the convention between annual meetings, are at 152 Madison Avenue, New York, N. Y. In cooperation with its subsidiaries, the Council of Christian Education, the Council of Finance and Promotion, and the Council on World Evangelization, it administers the unified missionary and educational interests of the denomination and, together with some 20 other committees, conducts the principal convention affairs. Two major boards are the Board of Education, which with assets of approximately \$220,000 cares for the work and property

of the denominational schools and colleges, and the Ministers and Missionaries Benefit Board, which with assets of over \$20,000,000 supervises the pension and emergency aid work for ministers, missionaries, and their dependents. The American Baptist Home Mission Society is situated at 23 East Twenty-sixth Street, New York, N. Y.; the Baptist Young People's Union of America, at 203 North Wabash Avenue, Chicago, Ill., and the American Baptist Publication Society, at 1701 Chestnut Street, Philadelphia, Pa.

BAPTIST CONVENTION, SOUTHERN This body of the Baptist denomination was formed in 1845, when Southern Baptists withdrew from the national organization on account of the slavery issue, also for the better administration of the work of the Convention. Since that time it has functioned, not as a new denomination, but as a separate organization for the purpose of directing missionary and general evangelistic work in the white Baptist churches of the Southern and Southwestern States.

According to the official *Handbook* for 1935 the Southern Baptist Convention was composed of 18 State conventions, which reported 24,360 churches, 23,272 ordained ministers, 209,364 baptisms during the year, 4,277,052 church members, 22,072 Sunday Schools, 3,104,411 Sunday School pupils, and 33,864 Baptist Training Unions with a membership of 649,773. Church property was valued at \$202,095,794. The contributions for current expenses and beneficence totaled \$24,653,276. The receipts of the convention's boards in 1934 were as follows: Southern Baptist Foreign Mission Board (Richmond, Va.), \$907,475; Southern Baptist Home Mission Board (Atlanta, Ga.), \$320,031; Sunday School Board of the Southern Baptist Convention (Nashville, Tenn.), \$1,703,885; and Old Ministers Relief and Annuity Board (Dallas, Texas), \$620,737.

The denomination maintained 73 schools and colleges, including 5 theological schools, 29 senior colleges, 21 junior colleges, and 18 academies, with a total enrollment of 27,253 students, 1814 ministerial students, and 1645 instructors. The educational endowment amounted to \$22,437,582, and property was valued at \$34,964,021. It also reported 24 hospitals (two fostered by the Southern Baptist Convention and 22 by the State conventions), valued at \$13,832,745 and treating 81,449 patients during the year, 19 children's homes, with property value of \$5,244,896 and accommodating 4611 children; and three homes for the aged.

The annual session of the Southern Baptist Convention was held in Memphis, Tennessee, May 15-18, 1935. The various boards and agencies of the convention showed decided gains in receipts for the year. The Baptist 100 Thousand Club enlarged its operations, giving greater emphasis to the work of the Promotion Committee of Southern Baptists. The committee sponsored an "Every-Member Canvass" during the week of November 24-Dec. 7, 1935, with the objective of securing weekly subscriptions totaling \$40,000,000. Of this amount \$9,000,000 was to go to the support of the various missionary, educational, and benevolent enterprises of the convention, while the remainder was to care for the local work of the churches. The officers elected for 1934-35 were: The Rev. John R. Sampey, D.D., LL.D., of Louisville, Kentucky, president; the Rev. Frank Tripp, D.D., of St. Joseph, Missouri, and the Rev. J. R. Hobbs, D.D., of Birmingham, Alabama, vice presidents; the Rev. Hight C. Moore, D.D., Litt.D., of Nashville, Tennessee, and the Mr. J. Henry Burnett of

Macon, Georgia, recording secretaries; and the Rev. Austin Crouch, D.D., of Nashville, Tennessee, executive secretary. Headquarters are at 161 Eighth Avenue, North, Nashville, Tennessee.

BAPTIST CONVENTION OF AMERICA, NATIONAL (NEGRO). For the fiscal year ending Aug. 30, 1934, the National Baptist Convention of America reported 1420 associations, with 61 affiliated State conventions. There were 21,692 ordained ministers and a membership of 3,691,525. There were 21,182 organized Sunday schools, and the Baptist Young People's Unions had an enrollment of 2,308,265. Contributions from all sources amounted to \$6,022,908. The next session of the Convention was to be held in Columbia, So. Carolina, in September, 1936. The president in 1935 was the Rev. G. L. Prince, D.D., Galveston, Tex.; secretary, the Rev. C. P. Madison, D.D., Norfolk, Va.; and treasurer, the Rev. A. A. Lucas, D.D., Houston, Tex. Denominational headquarters are at the National Baptist Publishing Board, 523 Second Avenue North, Nashville, Tenn.

BAR ASSOCIATION, AMERICAN. A national organization, founded in 1878 to advance the science of jurisprudence, the administration of justice, harmony in legislation, and the observance of legal precedents throughout the United States, as well as to uphold the legal profession and promote good understanding among its members.

The Association's fifty-eighth annual meeting was held in Los Angeles, Calif., July 16-19, 1935. Scott M. Loftin, the retiring president, spoke at the opening session on "Independence of the Judiciary." Other addresses were made by Benjamin Wham, on "The Barrister and the Solicitor in British Practice. The Desirability of a Similar Distinction in the United States." Earl Warren, Roscoe Pound, George Z. Medalie, and Justin Miller participated in a symposium on "Criminal Law and Its Enforcement." The general topic of "Professional Ethics and Disciplinary Procedure" was discussed by Judge John J. Parker, Charles P. Megan, and Judge Orie L. Phillips. A discussion of "Better Organization of the Bar" was participated in by Jefferson P. Chandler, Walter P. Armstrong, Carl B. Rix, Charles E. Clark, Earle W. Evans, Harry P. Lawther, Frank E. Atwood, and James Grafton Rogers.

Preceding and during the annual meeting there were held sessions of the following sections of the association: Criminal law; insurance law; international and comparative law; judicial; junior bar conference; legal education and admissions to the bar; mineral law; municipal law; patent, trademark, and copyright law; public utility law; and real property law. The Commissioners on Uniform State Laws, the Conference of Bar Examiners, and the National Association of Attorneys-General also met on this occasion.

The membership of the association in 1934 was approximately 28,000. Its official organ is the *American Bar Association Journal*. William L. Ransom of New York City, was elected president for 1935-36, John H. Voorhees of Sioux Falls, S. D., was reelected treasurer and William P. MacCracken, Jr., of Washington, D. C., secretary. Headquarters of the association are at 1140 North Dearborn Street, Chicago, Ill. See LAW.

BARBADOS, bar-bā-dōz. A British West Indian colony east of the Windward Islands. Area, 166 sq. miles; population (Jan. 1, 1935), 182,440 of whom 15,200 were in Bridgetown, the capital and chief port. In 1934, births totaled 5380; deaths, 4176; marriages, 1011.

Production and Trade. The staple products were sugar and cotton. The output of sugar for 1934-35 totaled 80,500 tons (including molasses in terms of sugar). Rum produced (1934) amounted to 267,363 proof wine gallons. In 1934, total imports were valued at £1,914,554; total exports were £1,479,277. Canada received 76 per cent of the domestic exports and Great Britain 12.8 per cent. Sea Island cotton produced in 1935 totaled 40,810 lb.

Government. For the fiscal year ended Mar. 31, 1935, revenue amounted to £479,960; expenditure, £414,109; public debt, £267,920; sinking fund, £45,905. Government was vested in a governor aided by an executive council, an executive committee, a legislative council of 9 members (appointed by the King), and a house of assembly of 24 members (elected annually by the people). Governor in 1935, Sir M. A. Young.

BARBUSSE, bār'bus', HENRI. A French writer, died in Moscow, U.S.S.R., Aug. 30, 1935. Born at Ausnières, France, May 17, 1874, he was educated in the classics and philosophy at the Collège Rollin in Paris and at the Sorbonne. At the close of his studies he entered journalism, and in 1893 won a prize for poetry offered by *L'Echo de Paris*. In 1895 he produced *Pleureuses*, his first volume of poems. Shortly afterwards he became the publishing secretary of the house of Pierre Lafitte, and later was the literary director of Hachette. In 1910 he edited the magazine *Je Sais Tout*.

At the outbreak of the World War, Barbusse enlisted with the 231st Infantry, was wounded three times, and twice cited for bravery. In 1916, he published *Le Feu*, which won him fame overnight. It dealt with the war from the poilus' viewpoint, and depicted the crudeness and brutality of trench life. In 1917 the book was awarded the Prix Goncourt, although condemned by the Government for its defeatism. At the close of the War, M. Barbusse was a dyed-in-the-wool pacifist.

Le Feu was followed by *Clarté* and *La Lueur dans l'abîme, ce que veut le groupe Clarté*, both of which continued the author's purpose of using art as a vehicle for social regeneration. Subsequently, he organized the Clarté movement, which sought to group together the writers of the world and interest them in the social and political progress of humanity. Also he became one of the editors of *L'Humanité* a French radical newspaper. Together with Paul Vaillant Couturier, Raymond Lefebvre, and others, he aided in forming the Republican Association of Former Combatants, which was largely responsible for bringing about the split in the French Socialist Party, that resulted in the formation of the Communist Party in 1920. In 1923 he joined the Communist Party, and thereafter spent much time in Soviet Russia, which he said he found to be the only country where freedom and true pacifism existed. He visited the United States in 1933 and when in New York City addressed a large meeting under the auspices of the United States Congress Against War. At the time of his death he was attending the Seventh Congress of the Communist International in Moscow.

His works, many of which were translated into English, include: *Les Suppliantes* (1903); *L'Enfer* (1908); *Nous autres*, short stories (1914); *Quelques Coins du Cœur* (1921); *Le Couteau entre les Dents* (1921); *Les Enchaînements* (1925); *Les Bourreaux* (1926); *Force* (1926); *Jésus and Les Judas de Jésus* (1927); *Fait Divers* (1928); *Voici ce qu'on a fait de la Géorgie* (1929); *Russie, Ce qui*

fut sera Elevation (1930); *Zola* (1932); *Stalin* (1935).

BARLEY. The 1935 barley production of 36 countries reporting to the International Institute of Agriculture, exclusive of the Soviet Republics and countries south of the equator, was estimated at 1,291,849,000 bu., 10.1 per cent above the production in 1934 and 3.9 per cent below the average for the five years 1929-33. The barley area of these countries in 1935 was reported at 60,315,000 acres, an increase of 11.2 per cent over that of 1934 and only slightly under the five-year average. The yields of the leading countries outside of the United States were reported as follows: Germany 154,107,000 bu., Spain 91,068,000 bu., Canada 87,512,000 bu., Japan 78,610,000 bu., and Poland 65,616,000 bu. The Soviet Republics reported a yield of 360,470,000 bu. in 1934 and Argentina a yield of 42,714,000 bu. in the crop year 1934-35.

The 1935 barley crop of the United States estimated by the Department of Agriculture at 292,249,000 bu., was nearly two-and-one-half times the crop of 118,348,000 bu. in 1934 but was only slightly above the average of 282,841,000 bu. for the five years 1928-32. The area harvested in 1935 was 12,858,000 acres compared with 7,095,000 acres in 1934 when drought and heat reduced both yield and acreage. The larger part of the 1935 increase in acreage occurred in Minnesota and the Dakotas. The average yield per acre for 1935, 22.7 bu. compared with 16.7 bu. in 1934, was practically the same as the average of 22.6 bu. for the 10 years 1923-32. The 1935 farm price based on preliminary estimates was 38.1 cents per bu. and the average price for the crop marketing season of 1934, 68.3 cents. The 1935 barley production of the leading States was reported as follows: Minnesota 58,752,000 bu., North Dakota 45,558,000 bu., South Dakota 43,130,000 bu., California 36,642,000 bu., and Wisconsin 25,878,000 bu. During the fiscal year ended June 30, 1935, the United States exported 4,050,000 bu. of barley and 83,000 bu. of malt and imported 7,824,000 bu. of barley and 131,898,000 lb. of malt. The Missouri Agricultural Experiment Station has developed a variety of winter barley of superior winter resistance and of early maturity.

BARUS, CARL. An American physicist, died at Providence, R. I., Sept. 20, 1935. Born in Cincinnati, Feb. 19, 1856, he was graduated from the School of Mines, Columbia University, in 1876, and subsequently went to Germany to attend the University of Wurzburg, where he studied experimental physics under Professor Kohlrausch from 1876 to 1880 and received his doctor's degree, *summa cum laude*, in 1879. Returning to the United States in 1880 he became associated with the U. S. Geological Survey as a physicist engaged in special research, but in 1892 that work was discontinued by Congress. Then he joined the U. S. Weather Bureau and served for a year as professor of meteorology, which service was also discontinued. From 1893 to 1895 he was a member of the staff of the Smithsonian Institution, when he accepted the Hazard professorship of physics at Brown University, and retired therefrom as emeritus professor in 1926. He became dean of the Graduate Department in 1903, and served until 1926.

As one of the foremost physicists in the world, Dr. Barus was appointed member of a congressional committee of seven appointed in 1894 to draw up the specifications for the electrical standards of the United States. He was elected a non-resident fellow of the American Academy of Sciences of Massachusetts in 1890 and three years later to the National

Academy of Sciences. He served as vice president and chairman of the section of Physics of the American Association for the Advancement of Science in 1897, and became a corresponding member of the British Association for the Advancement of Science. In 1902 Dr. Barus was appointed a member of the advisory committee of Carnegie Institution. As President of the American Physical Society in 1904 he represented American physics at the World Congress at St. Louis. Also, in that year he received the Rumford medal of the Academy of Arts and Sciences for his work in developing methods for high temperature and high pressure measurement, and the application of these methods to problems concerning the dynamics of the earth's crust, the age of the earth, and the determination of its internal state of fusion. In 1905 and 1910 he was a member of the honorary committee of the International Congress of Radiology.

As an author he produced many books and pamphlets which set forth the results of his original experiments in physics, particularly in the field of thermodynamics, magnetism, and laws of gases. Among them may be mentioned: *The Electrical and Magnetic Properties of the Iron Carburets* (1885); *Physical Properties of the Iron Carburets* (1886); *The Measurement of High Temperatures* (1889); *Viscosity of Solids* (1891); *Die Physikalische Behandlung Hoher Temperaturen* (1892); *Compressibility of Liquids* (1892); *Mechanism of Solid Viscosity* (1892); *Volume Thermodynamics of Liquids* (1892); *High Temperature Work in Ignecous Fusion* (1893); *Condensation of Atmospheric Moisture* (1895); *Experiments with Ionized Air* (1901); *The Structure of the Nucleus* (1902); *Nucleation of the Atmosphere* (1905); *Nucleation of the Uncontaminated Air* (1906); *Condensation Induced by Nuclei and Ions* (4 vols., 1907-10); *Elliptic Interferences* (3 vols., 1911-15); *Diffusion of Gases through Liquids* (1913); *Interferences of Reversed and Non-reversed Spectra* (4 vols., 1916-19); *Interferometer Experiments in Acoustics* (3 vols., 1921-25); *Acoustic Experiments with Pin-Hole Probe and the Interferometer* (1927). In 1899, he edited *The Laws of Gases*.

BASEBALL. The Detroit Tigers, led by Mickey Cochrane, again won the American League pennant in 1935 and this time succeeded in taking the World Series, the first time in the history of baseball that the highest honors in the sport had rested in Detroit. But it was in the National League that the thrills of the campaign were retained. As in 1934, the New York Giants seemingly had the National League pennant safely wrapped up in the early summer, but again the Giants tumbled from the lead when their hitters failed to find the range and their fine pitching staff stumbled. The St. Louis Cardinals, 1934 winners of the World Series, then took the lead but they, too, tumbled in the closing days, succumbing before an inspired rush of the Chicago Cubs, who hurtled into the lead on a winning streak of 21 straight games. This long winning streak enabled the youthful Cubs, managed by the veteran Charley Grimm, to burst past both the Giants and Cardinals and win the pennant in the final two days of the campaign. The last two games of the winning streak were employed in beating the fading Cardinals twice, the first victory clinching the flag.

The Tigers won their pennant by an eight game margin over the New York Yankees, who threatened with the Chicago White Sox in the early days of the season, but who faltered before the

excellence of the Detroit nine. The Tigers won the World Series with a smashing display in six games. Cochrane, Tommy Bridges, Goose Goslin, Charley Gehringer, Hank Greenberg, and Schoolboy Rowe were the particular bright lights of the Detroit team. The Tigers sliced the largest World Series purse in history, each Detroit member receiving \$6544 as his share of the booty.

Aside from the actual races in both leagues, the Boston Braves provided the most entertainment. They started the race in financial difficulties, when Judge Emil Fuchs, their owner, was banned by the National League owners from running dog races in Braves Field. Fuchs then obtained the services of Babe Ruth from the Yankees, but Ruth's playing was mediocre and his position as vice-president of the club meaningless. He left the Braves in mid-season and the Boston entry proceeded to set a major league record, losing 115 games in the campaign. Ruth thus was let out of baseball after a most glorious career. Late in the year Fuchs was ousted and at the December meeting of the League, Bob Quinn resigned as business manager of the Brooklyn Dodgers and, with backing supplied by Charles F. Adams, was made president of the Braves for 1936.

Floyd (Arky) Vaughan, Pittsburgh short-stop, won the batting crown of the National League with a .385 average, and Charles (Buddy) Myer of the Washington Senators took the American League crown with .349, the lowest top average in 27 years. Jimmy Foxx, of the Philadelphia Athletics, tied with Greenberg of the Tigers for the American League home run honors, each making 36. Walter Berger, Braves outfielder, was best in the National League with 34. Darrell (Cy) Blanton, a newcomer to the major leagues and a pitcher for the Pittsburgh Pirates, was the most effective hurler of the National League, with Bill Lee of the Cubs and Dizzy Dean close up. Bob Grove, of the Red Sox, staged a remarkable comeback to lead American League pitchers.

Trades were consummated after the season, the news being the strengthening of the Boston Red Sox by the seemingly inexhaustible bankroll of Tom Yawkey, their young owner. Besides purchasing Foxx from the Athletics Yawkey also acquired Johnny Marcum, a pitcher, Eric McNair, infielder, and Roger Cramer, outfielder. The Tigers bought Al Simmons, outfielder, for \$75,000 from the Chicago White Sox, and the Giants acquired Burgess Whitehead, second baseman, from the Cardinals.

Montreal's Royal won the International League pennant, and Minneapolis was first in the American Association. There was no Little World Series in 1935 but late in the year the magnates voted to resume the post-season event in 1936. Atlanta won the Southern League championship and the title in the Pacific Coast League went to the San Francisco Seals. Oklahoma City won the Texas League race and also captured the Dixie Series. Dartmouth was supreme in the Eastern Intercollegiate League and the University of Minnesota won in the Big Ten. Holy Cross had the best record in intercollegiate competition, winning 22 of 23 games played. Gastonia defeated Sacramento for the American Legion junior championship.

BASKETBALL. Introduced into Madison Square Garden in New York where tremendous crowds attended college doubleheaders staged by Ned Irish, the sport of basketball experienced an impressive advance in 1935, which late in the year was furthered by the announcement that

the game would be played in the 1936 Olympic games for the first time in the history of the quadrennial games. Teams from all sectors of the country were brought into the Garden, and the different styles of play as well as the different interpretations of the rules by officials from other districts were carefully scrutinized. A few less than 100,000 persons paid to see the intersectional and intricacy contests and to start the new campaign in December, 17,462 spectators turned out to watch New York University beat the University of California and St. John's University defeat Westminster.

Attendance records were shattered in the South-eastern Conference where Louisiana State and Kentucky, which did not meet, tied for the title with unblemished records. New attendance peaks were reached in the Western Conference, which developed a three-way tie for the championship among the defenders, Purdue, Illinois, and Wisconsin. And greater crowds watched the Southern Conference tournament from which North Carolina emerged victor over the defending champion, Washington and Lee. Ties for league and conference title were unusually numerous. Southern Methodist, Rice, and Arkansas topped the Southwestern Conference and Drake and Creighton split Missouri Valley honors. The University of Pennsylvania five, 1933-34 champion, retained the Eastern Intercollegiate League laurels when Bob Freeman gave Penn a one-point margin in the final second of the play-off game. Pittsburgh won the Eastern Conference race. But Eastern honors as well as most serious consideration for national honors went to New York University, which despite an unexpected defeat by Yale, a quintet hapless in other games, won 19 of 20 games, numbering among its victims such powerful teams as Notre Dame, Kentucky, Georgetown, Temple, Navy, and Rutgers. Long Island University was another strong team, winning 24 of 26 games and scoring more than a thousand points. The Kansas City Stage Lines A.A. took the National A.A.U. championship and the women's honor's went to the Tulsa Stenos A.A.

BASQUE PROVINCES. The north central Spanish provinces of Alava, Guipúzcoa, and Vizcaya (Biscay). Total area, 2739 sq. miles; population 929,739 (Jan. 1, 1934 estimate). The province of Navarra, which had a large Basque population, was not a part of the Basque Provinces. See SPAIN under *History*.

BASUTOLAND, ba-sōō'tō-lānd'. A native territory in South Africa. Area, 11,716 sq. miles; population estimated at 570,000 compared with 498,781 in the 1921 census. Maseru, the capital, had 2319 inhabitants (1921) including 1890 natives. During 1934 there were 810 elementary and primary schools (including 10 institutions for specialized training) with a total of 71,764 students enrolled.

Production and Trade. Maize, kaffir corn, and wheat were the main grain crops. Wool, mohair, and cattle were other important products. Livestock (Jan. 1, 1935): 1,673,800 sheep; 544,850 goats; 400,000 cattle; 75,350 horses; 15,000 donkeys, and 1100 mules. In 1934, imports were valued at £566,767 exclusive of government imports of £62,550; exports, £284,522 of which wool (5,093,858 lb.) represented £118,744; wheat, £88,919; livestock, £55,960; hides and skins, £6605.

Government. For 1933-34, revenue amounted to £246,144; expenditure, £292,114. Administration was by a resident commissioner who was under the direction of the British High Commissioner for Ba-

sutoland, etc., who possessed legislative authority which was exercised by proclamation. Resident Commissioner, E. C. Richards (Mar. 20, 1935). See SOUTH AFRICA, UNION OF, under *History*.

BATES COLLEGE. A nonsectarian college for men and women at Lewiston, Me., founded in 1864. The enrollment for the autumn term of 1935 was 644. In the 1935 summer session there were 212 students. The faculty numbered 42. The endowment amounted to \$1,713,189. Total income was \$284,915, of which \$120,612 was from interest on investments, \$160,463 from student fees, and \$3839 from gifts. The library contained 67,525 volumes. President, Clifton Daggett Gray, Ph.D., LL.D.

BATTLESHIPS. See NAVAL PROGRESS.

BAVARIA. See GERMANY.

BAY BRIDGE. See BRIDGES.

BEAUX-ARTS INSTITUTE OF DESIGN. A school of fine arts in New York City, planned after the École des Beaux-Arts in Paris and organized in 1916 by the Society of Beaux-Arts Architects. The enrollment during the year 1934-35 consisted of 1450 architectural students, 134 students of sculpture, 115 students of mural painting, and 69 creative design students. Due to a lack of support the Department of Sculpture has been temporarily discontinued beginning with the school year 1935-36. The most important prize is that given by the Society of Beaux-Arts Architects, which amounting to \$3600 affords two and one-half years' study in architecture at the École des Beaux-Arts in Paris. There was also a traveling scholarship for sculptors amounting to \$1200, the winner being required to spend three months at the Fontainebleau School of Fine Arts and to travel abroad. The director in 1935 was Whitney Warren, the secretary was Henry R. Sedgwick. Headquarters are at 304 East 44th Street, New York City.

BECHUANALAND (bēch'ōō-a'na-lānd' or bēk'ū-) **PROTECTORATE.** A British territory in South Africa. Area, 275,000 sq. miles; population (1921), 152,983 of whom 1743 were Europeans. The principal villages were Serowe with an estimated population of 25,000, Kanye, 12,000; Molepolole, 9000, Mochuli, 8000; Maun, 5000; and Ramoutsa, 3500.

Production and Trade. Animal husbandry was the main industry. Grain crop production was dependent on the rainfall. Livestock (1934) 1,450,000 cattle; 315,000 goats; 170,000 sheep; 8484 donkeys; and 3064 horses and mules. The output of gold and silver mined during 1933-34 was valued at £22,327. Custom duties were collected by the Union of South Africa and paid into the Union Treasury which paid an annual lump sum to Bechuanaland. For that reason full figures for imports and exports were not available. In 1933, exports of dairy products (by European settlers) totaled £26,889; hides and skins, £4200 (1931); hides and karosses of wild animals, £922. Imports (1933) by traders were valued at £150,896.

Government. The protectorate was administered by a resident commissioner (Lt.-Col. C. F. Rey in 1935) with headquarters at Mafeking, Union of South Africa, under the British High Commissioner for Basutoland, Bechuanaland, and Swaziland (Sir W. Clark in 1935) who had the power to legislate through proclamation. See SOUTH AFRICA, UNION OF, under *History*.

BETTERIES. See ENTOMOLOGY, ECONOMIC.

BELGIAN CONGO. See CONGO, BELGIAN.

BELGIUM. A kingdom of Western Europe. Capital, Brussels. Reigning sovereign in 1935,

Leopold III, who succeeded to the throne Feb. 23, 1934.

Area and Population. Including the cantons of Eupen and Malmédy ceded to Belgium by Germany in the Treaty of Versailles, Belgium has an area of 11,775 square miles. The estimated population on Dec. 31, 1933, was 8,247,950 (8,092,004 at the 1930 census). Living births in 1933 numbered 135,769; deaths, 108,377; marriages, 65,098; emigrants, 16,229; immigrants, 19,325. The chief towns, with their estimated populations on Dec. 31, 1933, are: Brussels, with suburbs, 891,422; Antwerp (Anvers), 289,478; Ghent (Gand), 168,319; Liège (Lüttich), 164,908; Mechlin (Malines), 61,757; Borgerhout, 55,970; Bruges (Brugge), 52,289.

Education. Besides the numerous private and free schools, many of them under clerical control, there were on Dec. 31, 1933, a total of 8587 primary schools, with 973,989 pupils, 4057 infant schools, with 257,747 pupils; and 1135 adult elementary schools, with 30,030 pupils. For secondary and higher education there were in 1932-33, 167 higher grade schools, with 44,048 pupils; 70 preparatory and other schools, with 16,949 pupils; and four universities, the enrollment of which in 1932-33 was: Brussels, 2828; Ghent, 1851; Liège, 2812; and Louvain, 3965.

Production. Highly developed manufacturing, mining, and agriculture enable Belgium to support a population of 700 per square mile, or one of the densest in Europe. About 40 per cent of the area is under cultivation and 18 per cent is covered by forests. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in metric tons): Wheat, 389,800 (410,100); rye, 528,400 (566,700); barley, 105,200 (100,400); oats, 684,200 (830,500); potatoes, 3,178,600 (3,689,300); sugar beets, 1,607,000 (1,515,800); tobacco, 6400 (6200); flax, 20,600 (16,900). Livestock on Jan. 1, 1934, included 1,812,607 cattle, 233,289 horses, and 1,352,526 swine.

Among the wide variety of industrial products, the most important are iron and steel, rayon, glass, automobiles, lace, linen, gloves, refined sugar, distillery products, margarine, and matches. The mineral and metallurgical production in 1934, with 1933 figures in parentheses, was (in 1000 metric tons): Coal, 26,366 (25,278); coke, 4746 (4393); pig iron, 2907 (2745); steel ingots and castings, 2948 (2731); lead (smelter), 65 (61.6); zinc, 174.9 (137.3). Production of electricity in 1934 from plants of over 100 kw. capacity was 4,023,000,000 kwh. (3,902,000,000 in 1933). A census of Dec. 31, 1930, showed 1,938,118 persons engaged in industry, the industries with the largest number of workers being, in the order named, metals, textiles, construction, transport, and mining.

In 1935 raw steel production was 2,965,665 metric tons; finished steel, 2,303,760 tons; pig iron, 3,060,447 tons; coal, 26,484,230 tons.

Foreign Trade. Under the Customs Union agreement of Mar. 5, 1922, foreign trade statistics of Belgium and Luxembourg are combined. Imports of merchandise in 1934 were valued at 13,702,000,000 Belgian francs (14,822,000,000 in 1933) and merchandise exports totaled 13,443,000,000 francs (14,032,000,000 francs in 1933). The principal sources of imports in 1934 were (in millions of francs): France, 2299; Germany, 2002; Netherlands, 1434; United Kingdom, 1042; United States, 1006. Exports, in millions of francs, went mainly to France, 2325; United Kingdom, 1792; Germany, 1599; Netherlands, 1517; United States, 591.

Imports in 1935 were valued at 17,325,005,000 francs (preliminary) and exports at 16,146,219,000 francs. The 28 per cent change in the value of the franc during the year would be the equivalent of a 41 per cent increase in unit values, for purposes of comparison with the 1934 trade figures. U.S. statistics showed imports from Belgium in 1935 of \$39,759,908 (\$26,174,482 in 1934) and exports to Belgium of \$58,207,891 (\$50,005,704 in 1934).

Finance. Budget figures for the calendar years 1933 and 1934, the 1935 results as estimated Oct. 15, 1935, and the 1936 budget estimates, are shown in the accompanying table from *European Financial Notes* (No. 208), published by the U.S. Dept. of Commerce.

BELGIAN BUDGETS, 1933-36

Year	Revenues 1,000 francs	Expenditures 1,000 francs	Deficit (-) or surplus (+) 1,000 francs
1933	10,356,418	10,357,625	- 1,207
1934	9,928,002	10,227,200	- 299,198
1935	9,909,774	10,108,827	- 199,053
1936	10,429,390	10,402,335	+ 27,055

Actual tax collections in 1935 were 8,333,678,037 francs, as compared with 8,207,370,783 francs in 1934.

Communications. Belgium in 1934 had open to traffic about 3201 miles of state-owned but privately operated main railway lines, 3171 miles of provincial railways, 6465 miles of highways, 1050 miles of navigable waterways, and air lines linking Brussels, Ostend, Antwerp, Liège, and Le Zoute. Railway receipts and expenditures in 1934 were 2,215,171,000 francs and 2,261,000,000 francs, respectively. The Belgian merchant marine on June 3, 1935, totaled 402,200 gross tons. During 1934, 16,609 vessels of 26,033,102 net register tons entered Belgian ports with cargo and in ballast in the overseas trade. Of this total, 11,917 ships of 21,202,581 tons entered the port of Antwerp.

Government. The King exercises executive power through a ministry responsible to parliament. There is a Senate of 159 members and a Chamber of Deputies of 187 members, all elected for four years. Deputies are elected directly by universal male and restricted female suffrage. Part of the Senators are elected by direct suffrage and part are chosen indirectly by the provincial councils. The standing of the parties in the Lower Chamber following the election of Nov. 27, 1932, was: Catholics, 79; Socialists, 73; Liberals, 24; Frontists (Flemish Nationalists), 8; Communists, 3. The standing in the Senate after the elections of Dec. 4, 1932, was: Catholics, 75; Socialists, 65; Liberals, 18; Frontists, 1. Premier at the beginning of 1935, George Theunis (Catholic), heading a Catholic-Liberal coalition. For changes in 1935, see *History*.

HISTORY

Gold Standard Abandoned. Belgium's long struggle to maintain the gold standard was lost in the spring of 1935 when the imminent collapse of the banking system, accompanied by the rapid flight of gold from the country, forced the government to abandon its deflationary policy. The Theunis Cabinet, formed Nov. 19, 1934, was the last of the series of Catholic-Liberal coalition ministries which attempted to ride out the economic blizzard by adherence to orthodox economic doctrines. Like its predecessors, it sought to check the steady decline in Belgian foreign trade by ever more drastic cuts in the cost of production, hoping in this manner to reduce prices of Belgian

export commodities to the point where they could once more compete with similar exports from Britain, the United States, and other countries which had devalued their currencies.

During the first months of 1935 the government continued its policy of ruthless deflation by curtailing government expenditures, slashing doles and pensions, cutting wages and prices, lowering tariffs on agricultural imports, and in many other ways reducing business costs. At the same time it reduced taxes and extended large credits to the banks and to industry on liberal terms. Despite these measures, the export trade failed to respond favorably during the first quarter and unemployment increased. Moreover the policy of deflation, carried out primarily in the interests of the banking, industrial and business classes and bearing heavily upon the wage earners, the unemployed, the civil servants, and the farmers, provoked widespread social unrest. Demonstrations of the unemployed, threats of a general strike, and the withdrawal of the Socialists from the National Labor Commission appointed by King Leopold on February 10 to study the unemployment problem, led the government to take some alleviative measures.

The major factor in the subsequent debacle, however, was the unsound position of the private banks. Their reckless extension of credit during the first years of the depression left them unable to meet the withdrawals of their depositors when the credits became frozen and they were forced to draw increasingly upon the gold reserve of the National Bank of Belgium. The highly unstable condition of the Belgian economic and financial structure was aggravated during February and March by a sharp decline in the pound sterling, placing a new price barrier in the way of Belgian exports. In the second week in March the flight of capital from the country and the depletion of the gold reserve suddenly reached panic proportions. Gold withdrawals from the National Bank totaled 77,000,000 francs on March 13, 180,000,000 on March 14, 354,000,000 on March 15, and 280,000,000 francs during the two-hour banking period on Saturday, March 16. The following day the government abandoned the gold standard by issuing decrees placing all foreign exchange operations and dealings in gold under its control.

The same day (March 17) Premier Theunis and several colleagues went post-haste to Paris in a last minute attempt to induce the French to lower their tariff wall against Belgian goods and thus insure an upswing of Belgian exports which might save the situation. Upon Premier Flandin's rejection of this proposal, the Theunis Cabinet resigned on March 19.

Van Zeeland Forms Cabinet. The collapse of the gold standard marked the end of the Catholic-Liberal coalition rule, which had been almost continuous since 1921. After an extended Cabinet crisis, accompanied by general public uncertainty and speculative activity on the Bourse, a new ministry was formed on March 25 by Dr. Paul van Zeeland. Dr. van Zeeland was vice governor of the National Bank and director of the Institute of Economic Science at Louvain University. His cabinet, representing a coalition of the three major parties, contained six Catholics, five Socialists, and four Liberals. The Socialists were forced to cooperate with their old bourgeois rivals by the strong possibility that the breakdown of parliamentary government at that juncture would result in a Fascist dictatorship.

Dr. van Zeeland presented his programme to

Parliament on March 29. Boldly departing from the orthodox economic policies of his predecessors, he proposed the establishment of a "managed economy" modeled in some respects on the American New Deal. Devaluation of the belga was the major point in his plan for the economic renovation of the country. Supplementary proposals were the establishment of an exchange-stabilization fund from the profit of devaluation, reorganization of the banking system, control of stock-exchange operations, the guaranty of bank deposits, creation of a public-works programme for the relief of the unemployed, conversion of Government bonds to reduce the burden of the public debt, and lowering of interest rates and taxes to lighten the burdens of industry.

Suspension of the gold standard and a 30 per cent maximum devaluation of the belga was approved by the Chamber of Deputies on March 30, by a vote of 107 to 53, and in the Senate by a majority of 110 to 20. The remainder of the Premier's plan was approved in principle and he was granted authority to govern by decree for one year, while putting it into effect. Devaluation of the belga by 28 per cent was decreed the following day. On April 1, also, other decrees were published putting into effect other points in the rehabilitation programme. The same day the Bourse reopened, after a five-day suspension. The first reactions to these developments were favorable. Wholesale prices rose, business spurred ahead, security values increased, and considerable reemployment took place. Conservative fears of immediate uncontrolled inflation were dispelled. The rapid improvement in the monetary situation permitted the Central Exchange Bureau to relax its control and on Apr. 28, 1935, it announced its decision to return to essentially the same conditions as those prevailing prior to March 18. Importers were able to buy foreign exchange freely to meet all their obligations.

The government used the profits of the devaluation of the belga to finance its recovery programme and to reduce its debt to the National Bank from 1,370,000,000 francs (the belga equals five francs) to 500,000,000 francs. Government securities were converted at a lower interest rate, the new average being 4 per cent. Conversion operations saved the Treasury about 620,000,000 francs annually. From the profits on revaluation of the gold reserve a fund of 1,000,000,000 francs was established to support the market for state bonds. By the decree of April 19 a Bureau for Economic Revival was established to execute, coordinate, and supervise the government's recovery measures. This agency, reflecting the authoritarian tendencies of the younger members of the Cabinet, was rendered ineffectual from the beginning by the opposition of the more conservative supporters of constitutional methods. The decrees of April 11 and 13 suspended the gold clause in domestic contracts covering leases and loans and those fixing interest. A decree of June 13 provided for the establishment of the Rediscount and Guaranty Institute as an adjunct of the National Bank, for the purpose of mobilizing banking assets and meeting special credit requirements. More rigid control of Belgian deposit banks was established by the decree of July 10.

The slow but steady economic improvement recorded under the van Zeeland rehabilitation programme led the Premier to declare on July 21 that the country was definitely on the road to recovery. When in August this recovery seemed to be slackening, the Minister of Public Works announced

that the government would spend 3,500,000,000 francs on a three-year public works programme to stimulate reemployment. The most threatening adverse factor in the situation was the failure of exports to expand in proportion to domestic business activity. The retail prices of ordinary foodstuffs also were out of line, having risen much higher than the 8 per cent increase in the retail price index recorded from April to September. At the end of August, the government raised salaries and pensions 5 per cent to compensate for increases in the cost of living.

By the end of the year the success of the devaluation experiment was reflected in practically all business indices. There was a minor boom in the building trade and in railway traffic. Port traffic showed a similar increase and bankruptcies showed an extraordinary decline. Tax returns rose substantially and there was a definite recovery in foreign trade.

In the midst of its recovery effort, the nation was shocked and grieved by the death of Queen Astrid (q.v.) in an automobile accident near Lucerne, Switzerland, on August 29. King Leopold, who was driving the automobile, was slightly injured. A world's fair, opened at Brussels on April 27, attracted numerous tourists to Belgium during the summer and aided appreciably the economic revival.

Foreign Relations. The van Zeeland Government strove to promote economic recovery by its foreign policy as well as by internal economic adjustments. Following the signing of a reciprocal trade agreement with the United States on February 27, negotiations for similar agreements with Australia, the Soviet Union, and various other countries were opened, but without marked success. A new clearing agreement with Germany went into effect August 1. It was expected to stimulate Belgian exports to Germany and permit the settlement of back debts. The political relations between Belgium and Germany remained cool, however, partly as a result of widespread Nazi propaganda for the reincorporation in the Third Reich of the enclaves of Eupen and Malmédy, ceded to Belgium by plebiscite after the World War. Belgian police arrested a number of Nazi agitators in the districts. Belgium joined in the application of League economic sanctions against Italy in connection with the Italian invasion of Ethiopia (q.v.). See *GERMANY under History*.

Consult Henri Laurent, "Belgium Under a New Leader," *Current History*, August, 1935.

BEREA COLLEGE. A nonsectarian, coeducational institution in Berea, Ky., founded in 1855 and designed to serve the educational needs of the mountain people of the Southern Appalachian region. The enrollment for the autumn of 1935 was 1723, distributed as follows: College, 699; academy, 584; foundation-junior high school, 399; nurses, 41. The enrollment in the summer session of 1935 was 327. The faculty numbered 109. The endowment amounted to \$9,634,364.99, and the income for the year ending June 15, 1935, was \$524,965.79. The library contained about 71,000 volumes. President, William J. Hutchins, D.D., LL.D.

BERG, ALBAN. An Austrian modernist composer, died in Vienna, Dec. 24, 1935, where he was born, Feb. 9, 1885. While working as a clerk, he studied composition under Arnold Schonberg (1904-08), from whom he absorbed his revolutionary ideas. His first composition was a setting of a poem by Theodor Storm in 1900, *Schliesse mir die Augen beide*, to which he composed an-

other setting in 1925. In 1908, he composed a one-movement piano sonata in B minor which he designated as *Opus 1*. During this same period he also wrote "Four Songs," which were preceded by "Seven Early Songs"; a second group, "Five Orchestral Poems After the Texts by Peter Altenberg," and "Four Pieces" for clarinet and piano, both dedicated to Schönberg. "Three Orchestral Pieces" appeared in 1914 and was followed by "Chamber Concerto" for piano, violin, and 13 wind instruments, and a *Lyric Suite* (1926), in which 12-tones were used in large measure. In 1929 appeared his concert aria, *Wine*.

Berg's chief work, which was also considered the most important opera of the post-war decade, was *Wozzeck*. It was first performed at the Berlin Opera in 1925, under the direction of Erich Kleiber—a performance known for its artistic perfection—and later produced throughout Europe, and, in America, by the Philadelphia Grand Opera Company, under the direction of Stokowski, on Mar. 19, 1931. On Nov. 24, 1931, it was brought by the Philadelphia Opera Company for a single performance to the Metropolitan Opera House in New York. This opera was first begun in 1914 but its completion was interrupted by the World War and was not accomplished until 1922. The story is based on a play of the same name by Georg Buchner. Of this opera, Lawrence Gilman, music critic of the *New York Herald-Tribune*, said that after Debussy's "Pelléas and Mélisande," it was "the most original and seizing thing in the lyrico-dramatic art of the last half-century."

His latest operatic work was *Lulu*, based on two dramas of Frank Wedekind, upon which he was working at the time of his death. This was never performed as a stage work, but the world première of five fragments of it was given at the Berlin Staatsoper on Dec. 1, 1934. These were first presented in America by the Boston Symphony under Serge Koussevitzky in March, 1935, and in New York in April, and in November were again given in New York by the Philadelphia Orchestra under the direction of Otto Klemperer. Critical opinion was divided as to the merit of this last work.

In 1925, Mr. Berg was elected a director of the Austrian Branch of the International Society for Contemporary Music, and from 1930 was a member of the Prussian Academy of Fine Arts.

BERMUDA. A British colony in the Atlantic 580 miles east of Cape Hatteras, comprising 360 small islands (20 inhabited). Area, 19.3 sq miles; population (1933 est.), 21,116. Hamilton, the capital, had 3259 inhabitants. Bermuda was the headquarters for the West Indies and Atlantic Squadron of the British Navy.

Production and Trade. Onions, potatoes, green vegetables, cut flowers, and lily bulbs were the chief products. Bananas, and arrowroot were other products. The value of agricultural production during 1934 was estimated at £201,500. Vegetables exported during 1934 totaled 142,194 bu.; lily bulbs, 2309 cases—the U.S.A. and Canada were the main markets. Total imports during 1934 were valued at £1,340,727; total exports, £294,762. The new channel at the entrance to St. George's Harbor was officially opened during May, 1935.

Government. For 1934, revenue amounted to £363,473; expenditure, £372,065; public debt, £112,756. Budget estimates (1935): revenue, £388,134; expenditure, £394,390; (1936): revenue, £378,356; expenditure, £364,595. The colony was administered by a governor (who also was the commander-in-chief of the military forces) assisted by an ex-

ecutive council of 9 and a legislative council of 9 (both appointed by the King), and a representative assembly of 30 members. Gov. Sir T. A. Cubitt was to be succeeded by Lieut.-Gen. R. J. T. Hildyard during April, 1936.

History. Construction was started in November, 1935, on the new air base which was estimated to cost £47,000 of which £28,000 was a grant from the Colonial Development Fund.

BERNSTEIN, HERMAN. An American journalist, died at Sheffield, Mass., Aug. 31, 1935. Born in Neustadt-Scherwindt, Russia, Sept. 21, 1876, he came to the United States in 1893. Following the completion of his education, he turned to journalism, and from 1900 contributed frequently to the *New York Evening Post*, *The Nation*, and to *Ainslee's Magazine*. From 1908 to 1912 and again in 1915 he served as special correspondent in Europe for the *New York Times*, and interviewed many celebrities, including Henri Bergson, Auguste Rodin, Georges Brandes, Kerensky, Bernard Shaw, and Schnitzler, and published his interviews in *With Master Minds* (1912). In 1914, he founded a Jewish daily called *The Day* in New York, and was its editor for two years. From 1915 to 1919 he filled the chief editor's chair of *The American Hebrew* and was also its publisher. From 1923 to 1928, he served as editor of *The Jewish Tribune*.

Mr. Bernstein made a special study of the condition of the Jewish people in the stricken countries of Europe during 1915 and 1916, and in 1917 the *New York Herald* sent him to Russia to describe the revolution. Through access to official archives, he obtained the telegraphic correspondence between Czar Nicholas and Kaiser Wilhelm during 1904-07, that was published in the *Herald*, and in 1918 issued in book form as *The Willy-Nicky Correspondence*. In 1919, still serving as special correspondent of the *Herald*, he was sent to Japan and Siberia with the American Expeditionary Forces, and in 1920 to the Paris Peace Conference. For the *New York American*, during the year 1920-21, he wrote a series of articles describing the new European nations created through the Treaty of Versailles.

In February, 1930, President Hoover appointed him United States Minister to Albania, and during his incumbency he negotiated the naturalization treaty between the two countries that was signed Jan. 21, 1931, and the extradition treaty, signed Mar. 1, 1932. He resigned in September, 1933, and became editor of *The Jewish Daily Bulletin*, but retired in 1934 to devote his time to literary work.

Mr. Bernstein was an ardent champion of his race and agitated at all times for the improvement of conditions among the Jews. In 1921 he wrote an exposé of the *Protocols of Zion* in *The History of a Lie*. He sued Henry Ford for libel as a result of a series of anti-Semitic articles that appeared in *The Dearborn Independent*, and in 1927 received a personal apology and a general retraction of the articles.

Besides his contributions to newspapers and magazines, he published a number of books, among which were: *The Flight of Time* (poems) (1899); *Contrite Hearts* (1905); *Celebrities of Our Time* (1925); *The Road to Peace* (1926); and *Herbert Hoover, The Man Who Brought America to the World* (1928); translated the works of Tolstoy, Gorki, and Andréev; and adapted the plays, *The Command to Love*, *Katerina*, *The Chief Thing*, and *Anathema*.

BESSARABIA, bēs'a-rā'bī-a. A territory joined to Rumania on Apr. 11, 1918, formerly a province of Russia. Area, 17,146 sq. miles; population, 3,001,472 (1934 estimate). See *RUMANIA* under *History*.

BIBLE SOCIETY, AMERICAN. Organized in 1816, this society has steadily carried forward its specific purpose of "circulating the Holy Scriptures without note or comment" and without discrimination as to class, color, or creed. Bibles, Testaments, and Portions are sold without profit and below cost or donated free when circumstances justify. During the 119 years of its existence, the society has issued 261,365,086 volumes and participated in the translation, publication, and distribution of the Scriptures in nearly 300 languages, dialects, and versions.

The work in the United States is carried on through 11 home agencies and some 100 auxiliary, State, and local Bible societies. Latin America and the Near East and Far East are covered by 12 additional agencies, while correspondents help carry on the work in other countries, especially in Europe and Africa. During 1934 the society issued 7,517,548 volumes in 176 languages. The number issued in the United States was 3,404,334, and in foreign lands, 4,113,214. Engaged in this distribution were 3309 agency secretaries, sub-agents, colporteurs, correspondents, and volunteers.

During 1934 a revision of the *Psalms* in Hinghua Colloquial Chinese and a translation of the New Testament for the Cheyenne Indians of Montana were published. Translation was in progress in Guatemala for the Man and Quiche Indians, in the Philippines on the Samareno Old Testament; revisions were advancing in Cebuan and Ibanag. Several other revisions and translations were under way or being studied in languages of widely scattered parts of the earth.

The budget of the society for 1934 was \$986,100. The officers were John T. Manson, president, the Rev. Eric M. North, D.D., and the Rev. George William Brown, D.D., general secretaries; the Rev. Lewis B. Chamberlain, D.D., recording secretary; Gilbert Darlington, treasurer, and Charles W. Fowle, assistant secretary. Headquarters of the society are in the Bible House, New York City.

BICKNELL, ERNEST PERCY. An American Red Cross official, died at Washington, Sept. 29, 1935. Born near Vincennes, Ind., Feb. 23, 1862, he graduated from the University of Indiana in 1887, and turned to newspaper work, serving as a reporter in Indianapolis until 1893. Later he was co-owner, with his brother, of the *Fort Wayne News-Sentinel*. Secretary of the Indiana State Board of Charities in 1893, he became director of the Chicago Board of Charities in 1898 and served till 1908. His first connection with the American Red Cross developed through his directorship of relief during the San Francisco earthquake and fire of Apr. 18, 1906, when he had charge of distributing among the sufferers a fund of \$650,000 raised in Illinois. Following the successful completion of his task he was asked to join the Red Cross, but refused. In 1907 he was persuaded to attend the International Red Cross Conference in London as a delegate, and the following year, Robert W. de Forest, and others interested in the Red Cross, offered him the position of director-general with his salary assured for five years by the Russell Sage Foundation. He accepted in October, 1908, and his long association with the Society was begun.

Mr. Bicknell's first practical experience as director was at Messina and Calabria, Italy, where he was in charge after the earthquake of December, 1908. At the outbreak of the World War he went to Europe to take charge of giving financial aid to stranded Americans. When he returned he became a member of the War Relief Commission of the Rockefeller Foundation and again went to Europe to study the effect of war upon the civilian population of the belligerent nations, with a view to instituting relief measures. He spent eight months of the year 1914-15 abroad with this Commission, which set up a system of relief for 8000 Belgian refugees in Holland, and initiated the American Sanitary Commission, which did so much in suppressing a typhoid epidemic in Siberia. In 1915 he returned to Washington and became director-general of the civilian relief, which post he held until May, 1917, when he again went abroad as a member of the first American Red Cross Commission to Europe, to supervise the relief work for the American Army and the civilian population of the invaded countries. In the fall of that year he went to Italy to superintend the emergency relief after the rout of the Italian Army at Caporetto. On Jan. 1, 1918, he was appointed Red Cross Commissioner to Belgium with the military rank of lieutenant-colonel, and under his leadership, thousands of lives were saved, and the burden of the Belgian peoples considerably lightened.

At the close of the War, the work of the Red Cross was extended to cover all the countries of Europe and in 1919 Mr. Bicknell was made deputy commissioner. He returned to the United States in 1920 and became acting director for foreign operations. Once more he went to Europe as American Red Cross Commissioner, remaining from 1921 to 1922. He returned to America in that year to resume his work as director of foreign operations, and on Apr. 1, 1923, was elected vice chairman of the Red Cross in charge of foreign operations. In 1929 he went to China as a member of the Red Cross Commission sent to study famine conditions there, and in 1931 was a member of the Nansen Refugee Relief Commission at Geneva. About two years before his death, ill health caused his retirement.

Mr. Bicknell's long and outstanding career in the service of the Red Cross was recognized by many nations who conferred many honors upon him. In 1921 the National Institute of Social Science awarded him its gold medal. He represented the United States at many international congresses of the Red Cross, and in 1908 and 1909 was president of the National Conference of Charities and Corrections. He served as a member of the executive board of the Boy Scouts of America, and as director of the National Association for the Study and Prevention of Tuberculosis. His memoirs, *Pioneering with the Red Cross*, were published posthumously in October, 1935.

BILITON. See NETHERLAND INDIA.

BILLIARDS. Welker Cochran, veteran from San Francisco, and Jimmy Caras, youngster from Wilmington, Del., took the most important billiard laurels of 1935. The former, world's 18.2 balkline champion, won the three-cushion title and the latter captured the world's pocket billiards championship by twice defeating Erwin Rudolph, once in a match which precipitated a tie for first place and again in the play-off. Willie Hoppe, the veteran New Yorker, retained the 18.1 title but failed to gain the long-sought three-cushion champion-

ship, bowing to Cochran in the final game of the tournament in Chicago. Hoppe finished second, beating Arthur Thurnblad for the place. The defending champion, Johnny Layton, didn't finish within the first three. Andrew Ponzi, the 1934 pocket billiards ruler, didn't defend his title in the tournament won by Caras in New York late in the year. Caras's victory was achieved by play well beyond his 25 years, but the high spot of the tournament was in Bennie Allen's run of 125, beating Joe Procita, 125-0.

Edward Lee of the New York Athletic Club, won his fifth consecutive national amateur three-cushion title, defeating Joe Deardorff of St. Louis, 50 to 33 in the 61 innings play-off. Howard Shoemaker captured the amateur pocket billiards crown and Edmund Soussa, the Egyptian, took the national amateur 18.2 title. Miss Ruth Harvey of Santa Monica, Calif. won the women's amateur championship.

Billiards, dormant to a great extent in 1934, blossomed in 1935 when the manufacturers of equipment changed the color of the table cloth to mauve from the age-old green and decorated the pocket trimmings with yellow. The balls were made solid-color and the table, chromium plated and streamlined, looked more and more like a piece of drawing room furniture than the implement of destruction to small boys it had been deemed in earlier days.

BIOLOGICAL CHEMISTRY. The impression gained by a survey of biological chemistry and related branches during 1935 is that it was in general a year of development rather than fundamental discovery, although a number of things were reported which were basically new.

Some interesting researches were concerned with determining the effect of deuterium and deuterium oxide (heavy hydrogen and heavy water) on biological material and biological processes. Contrary to earlier expectations, heavy water has not shown either highly stimulating or toxic properties in its effect on plants. Drs. Brun and Tronstad germinated peas in it up to concentrations of 40 per cent D₂O and found no stimulative effects. Drs. Curry, Pratt, and Trelease reported no effect of dilute heavy water (0.46 per cent) on the growth of *Aspergillus* or on the growth of wheat roots. Algal cells in contact with 97 per cent D₂O for 15 hours were not permanently injured. In 99.9 per cent D₂O, however, the rate of photosynthesis was reduced to 0.4 that in ordinary water. Dr. Barborn found that subcutaneous injection of 1 cc. 99 per cent D₂O in a white mouse depressed metabolism to one-half normal in the succeeding 9-12 hours. Larger and repeated doses caused greater depression lasting eight days.

In another type of experiment it was found that certain enzymes such as *Lactobacillus acidophilus* could cause ordinary hydrogen to change places with the heavy hydrogen in heavy water. It is thought that this reaction is not related to the life processes of the organism but resembles similar changes catalyzed by metals. Drs. Schoenheimer and Rittenberg have put deuterium to a very interesting use in biological research: they fed mice on a diet of fats containing deuterium combined chemically. This served to distinguish these food fats from the fats already present in the bodies of the mice, and consequently the course of these fats and their final fate could be determined. While the technique of this use of deuterium as an indicator does not seem to have been perfected, one set

of experiments with mice showed that fat taken as food is not directly consumed by the organism but is first deposited in the fat tissues. Although of quite a different type another indicator for biological processes might be mentioned here. Drs. O. Chienitz and G. Hevesy of Copenhagen fed phosphorus compounds, made radioactive by bombardment with neutrons, to rats and traced the course of the material and its duration in the body by means of instruments capable of detecting small amounts of radioactivity. They found that the average length of time which a phosphorus atom spends in the body is two months. Also by this means the conclusion was reached that the formation of bones in the animal body is a dynamic process involving continuous loss and replacement.

During the year there was great activity among the workers on vitamins, hormones, and related substances. Dr. Evans and co-workers reported an improved method for getting vitamin E from wheat germ oil. He succeeded in obtaining it in crystalline form. It is a complex alcohol. Drs. Ither, Orent, and McCollum described a new process for isolating vitamin B from brewer's yeast. Dr. Banerjee determined the quantity of ascorbic acid (vitamin C) in coconuts, Palmyra palms, and pineapple juice. He found the juice or milk of the coconut to be a very rich source of the vitamin. Dr. B. Ahmad of India estimated the relative amounts of vitamin C in unboiled and boiled vegetables. He found it to be higher in the latter and thinks that it is formed in the boiling process by the decomposition of an ester-like compound. A German physiologist found that vitamin D, the antirachitic vitamin, occurs in quite large amounts in mushrooms.

Some interesting and important work had to do with the effects of vitamins, hormones, and related substances on plants and animals. Laszlo of Hungary found that vitamin C in concentrations of 1 to 5 parts per 10,000 accelerated and increased the growth of shoots of germinating wheat. Synove Hansen experimented with sterile plant cultures and vitamin C and found that addition of the latter substance in small amounts caused an increase in weight of the plants of 35-75 per cent over that in the controls. The greatest differences were noted when the plants were in the flowering stage. Geoffrey, Bourne, and Allen applied the reagent acetic acid-silver nitrate, which gives a black stain with vitamin C, to certain protozoa, bacteria, molds, lichens, and algae. In all cases they obtained characteristic black granules and they suggest that vitamin C is essential to the existence of living protoplasm probably as an integral part of an oxidation reduction system. Glick and Biskind studied quantitatively the distribution of vitamin C in beef adrenal, where it occurs in the highest concentration in the body, by means of a specific reagent called 2, 6 dichlorophenol indophenol. A possible therapeutic use for vitamin C was announced by Drs. Jungblat and Zwerner of Columbia Medical Center and Drs. King and Mentow of the University of Pittsburgh. They found that the vitamin antagonized diphtheria toxins. Dr. Wright of Columbia found that this same vitamin is useful in cases of high blood pressure in that it reinforces the capillaries. A new synthesis was announced for vitamin C by which it can be produced in large quantities. The synthesis requires American corn or a similar grain as a starting material. From the corn, dextrose is produced which is converted into sorbitol, a polyhydric alcohol. Sorbitol by suitable chemical treatment

yields the vitamin. The best known property of vitamin C is its power to prevent scurvy.

Dr. George Wald of Harvard, using as material the eye of the frog, found that vitamin A was involved in the chemistry of vision. The visual purple coating the rods on the retina is changed by light to visual yellow. The latter is transformed to a white substance called retinene and that in turn becomes vitamin A. To complete the cycle the body builds visual purple, in a manner as yet unknown, from the vitamin. It has been thought for a long time that lack of vitamin A resulted in blindness. Dr. Hale also, experimenting with pigs, came to the conclusion that there is a relation between vitamin A and normal eye development and that defective eyes may often be the result of deficiency of vitamin A in the mother and in the ration. Ester M. Tress states that vitamin A added to the diets of school children tended to increase resistance to the common cold. Dr. E. H. Hughes of the University of California found that the reproduction of pigs was increased when fed on a ration high in vitamin A. It was stated by others that the fruitfulness of plants was not improved by the vitamin. Dr. C. C. Higgins reported a possible use for vitamin A as a therapeutic agent. He found that, mixed with an acid producing diet, it helped to dissolve kidney stones.

Dr. Robert R. Williams of Bell Telephone Laboratories determined the chemical structure of vitamin B. The material used for the structure work was obtained from rice polishings. The molecule contains in its make-up a double nucleus, one pyrimidine and one thiazole. Dr. Williams' work clears the way for a synthesis of the compound. A deficiency of this vitamin in food is responsible for the nerve disease, beri-beri. Prof. George Cowgill in his book *The Vitamin B Requirement of Man*, Yale University Press, discusses methods of determining the requirement, and the clinical conditions associated with a lack of the vitamin. He suggests its possible importance in cases of enlarged heart, bradycardia, and diseases of the digestive tract.

Although a number of investigators believe and have reported that vitamin D, the antirachitic vitamin, may exist in more than one variety, Dr. Ottar Rygh of Oslo fed the vitamin obtained from many sources to chickens and could detect no variation in the effects produced by different samples. Dr. C. I. Reed reported that vitamin D was an effective pain reducing agent in cases of arthritis.

H. Blumberg found that material contained in wheat germ oil is necessary not only for reproduction and late growth stimulation, but also for normal early growth, middle growth, and the maintenance of well-being. The effective substance here is either vitamin E or some other yet unrecognized fat soluble growth factor occurring in the oil. Vitamin E, according to Dr. J. R. Davidson of Winnipeg, Canada, increases the resistance to cancer in mice which have been treated with cancer producing agents.

A new food factor necessary for the growth of chickens was discovered by Dr. W. Dam of Copenhagen, and named vitamin K. Another new substance, announced by Dr. W. J. V. Osterhout of the Rockefeller Institute, was found in the protoplasm of unicellular animals and controls in some way the irritability of the cell. The substance is called simply "R." Dr. W. C. Rose and associates at the University of Illinois succeeded in identifying and preparing alpha amino beta hydroxybutyric acid. This compound is unique in that it is said to

be the one amino acid essential for life and growth.

Martin and Gardner performed interesting experiments with glutathione, cystine and cysteine, sulphur compounds which occur in proteins particularly in the hair and nails. These compounds were fed to rats hairless from birth. Glutathione had no apparent effect but cystine, fed at the rate of 5 milligrams per day, grew hair in a month while cysteine in equal amounts produced the same result in two weeks. The conclusion is that the sulphhydryl group, present in cysteine and potentially present in cystine, acts as a powerful stimulant to the hair follicle. Dr. C. W. Best, co-discoverer of insulin, with associates reported that choline, a nitrogen containing compound secreted by the pancreas, was found to be necessary to the functioning of the liver and an important factor controlling the sugar metabolism. It has therefore a possible value in the treatment of diabetes. A new hormone called enterogastrone produced by the upper intestinal walls was announced by Dr. A. C. Ivy of Northwestern Medical School. It is thought that this substance, since it inhibits stomach activity, may prove to be useful in the treatment of stomach ulcers.

The work of Dr. W. M. Stanley of the Rockefeller Institute on the virus which causes tobacco mosaic disease was hailed as an important contribution to our knowledge of virus diseases. Dr. Stanley succeeded in isolating the tobacco virus in considerable quantity and found it to be a crystalline protein like material. This may introduce a new class of disease producing substances and it indicates the possibility that viruses in general may not be living organisms.

The plant hormone, auxin, a substance stimulating growth, was produced synthetically by Drs. Thiamann and Koepfli of California Institute of Technology. Panthogenic acid, believed to be a universal essential of the growth and respiration of cells, was isolated by Dr. R. J. Williams of Oregon State College. Drs. N. K. Schaffer and M. Lee found that the growth hormone from the anterior pituitary is a specific stimulant of protein anabolism. Dr. Leon Velluz at the Paris Academy of Sciences stated that lithocholic acid was the most energetic agent known for the neutralization of the toxin of diphtheria.

The attack on the cancer problem by biochemists and workers in related fields continued vigorously throughout the year. Prof. J. W. Cook of the Cancer Hospital in London said in effect, during a lecture to the Bedson Club of Armstrong College, that certain types of skin cancer were prevalent among workers in coal tar, shale oil industries, and among mule spinners in cotton mills. The carcinogenic agents were found to be certain highly fluorescent constituents of tar, shale and lubricating oils which belonged to the benzanthrene group of hydrocarbons. Many of these compounds were synthesized and found to produce cancer in mice. Drs. Morton, Clapp and Branch reported that malignant growths were caused in 12 out of 60 mice by symmetrical triphenyl benzene and in 8 out of 25 by tetraphenyl methane. Another powerful carcinogenic compound, methylcholanthrene, was prepared by Dr. Fieser at Harvard. The explanation for the appearance of cancer in people not exposed to these chemical compounds has been made along two lines. Professor Cook also announced in his talk that cholic and deoxycholic acids which occur normally among the bile acids of man have recently been converted in the laboratory to a hydrocarbon of the benzanthrene type,

the methylcholanthrene already mentioned. Changes which might produce this compound are known to occur in the body and it may be, therefore, that cancer is due to abnormal decomposition of the bile acids. The other explanation, still in the tentative hypothesis stage, is that there is some relation between cancer and the sex hormones. Drs. Collip, Selye and Thompson at McGill have found that the female sex hormone produces tissue changes similar to the beginning stages of cancer. Also Drs. C. F. Geschickter and Dean Lewis announced during the year that they had found sex hormones in connective tissue tumors.

On the curative side of the cancer problem it has already been mentioned that vitamin E, the fertility vitamin, increases the resistance to cancer in mice. It has been found at the Pasteur Institute, Paris, that the injection of cancer cells into the skin of mice confers immunity to cancer. Along this same line Dr. A. Haddow of Edinburgh University tested the effect of carcinogenic substances on rats in which cancer had already been induced. He found that these compounds inhibited the growth of the tumors. He remarks in his report that the paradox here is only apparent and that x-rays also have the double action of inducing tumor and controlling the growth of tumor already established.

Since 1930 when the female sex hormone was isolated, there has been great interest in the chemistry of sex hormones in general. A male hormone, androsterone, was obtained in crystalline form from male urine by Drs. Butenandt and Tscherning in 1934. This substance plays an important part in the control of the secondary sexual characteristics of the male. Its activity is measured by its effect on the comb growth in castrated cocks. Recently, Dr. Butenandt announced the synthesis of a new compound related to androsterone which is several times more active physiologically than androsterone itself. It was made from androsterone by the reduction of the ketone group in that compound and named androstenediol. Drs. Gallagher and Koch expressed the view that the male sex hormone occurring in the testis is different from androsterone which was obtained only from the urine. That view was substantiated this year by Dr. Laqueur and his associates when they announced the isolation of the testicular hormone in crystalline form. This principle which has been given the name testosterone is several times more potent than androsterone. At the meeting of the American Chemical Society in San Francisco in August, Dr. Ruzicka described the artificial preparation of testosterone from cholesterol.

Drs. A. Butenandt and K. H. Slotta reported that they had obtained from soy beans a substance which has the power to overcome the causes of sterility in some cases. It is called progestin and has the property of stimulating the corpus luteum and preparing the female for a cycle of reproduction. Dr. Lower of the Cleveland Clinic announced the discovery of inhibitin, the counter-hormone of androsterone. He has found it useful in reducing enlarged prostate gland due to senility.

Dr. H. Jensen of the Johns Hopkins University School of Medicine points out, in his article in the *Journal of Chemical Education* for December, 1935, the similarity in chemical structure of such diverse substances of biological and medical importance as the bile acids, ergosterol (the precursor of vitamin D), the sex hormones, the cancer producing agents, and certain cardiac stimulants of both plant and animal origin. The chemical structure of all these is similar in that they have a common central

arrangement composed of three 6-carbon rings and one 5-carbon ring. Such a structure is called a sterol nucleus.

In recent years much information concerning the chemistry of the cardiac stimulating plant glucosides, such as digitalis, has come from the laboratories of Drs. W. A. Jacobs, A. Windaus, A. Tschesche, A. Stoll, and their associates. These substances, used in medicine in the treatment of heart ailments, break down on hydrolysis to sugars and a part called aglucone which is the carrier of the physiological activity. This year Drs. Jacobs and R. C. Edlerfield of the Rockefeller Institute, and Dr. A. Tschesche working independently showed that the carbon skeleton in aglucone is identical with that of the sterols. Such information as this may, of course, lead the way to a synthesis of valuable drug bodies. Related to this is the discovery by Drs. K. K. Chen and L. A. Chen that the poisonous secretions of various toads yield compounds which show a physiological behavior like that of the plant aglucones. Other investigators who have contributed to this work are Drs. H. Wieland, G. Hesse, H. Jensen, and E. A. Evans.

Recently, Drs. Henry D. Dakin and Randolph West of Presbyterian Hospital in New York City, have obtained from liver a substance which is highly potent in the treatment of anemia, many times more so than liver itself. So far the actual chemical nature of the substance has not been determined but it appears to be protein like and to consist of more than one chemical compound. An announcement from the Harvard Medical School by Drs. C. H. Fiske, Y. Subbarow, and B. M. Jacobson has a bearing on this problem. These investigators found that the effect of liver depends upon a mixture of three substances, two of which have been obtained in crystalline form. When administered together the three substances have a strong blood regenerating action, separately there is no effect at all. Another type of anemia, so-called nutritional anemia, seems to be helped greatly by vitamin B₁₂. This was reported to the American Society of Biochemists by Drs. J. L. Kyer and F. H. Bethel of Simpson Memorial Institute of Ann Arbor.

Prof. E. C. Dodds, Director of Courtauld Institute of Biochemistry, London and Dr. R. L. Noble reported the results of some experiments which indicate that the pituitary gland may regulate to an extent at least the reticuloendothelial system, the system concerned with the formation and destruction of blood cells. They found that injections of pituitary extract produce at first anemia in animals. The blood appears poor 4 or 5 days after the injection, but about 2 days later there appear new cells of a type which indicate that regeneration of blood is taking place.

Cortin, the hormone like secretion from the outer layer of the adrenal glands, is coming into more and more prominence in the treatment of certain diseases. It has been used with success in Addison's disease, an ailment definitely due to a deficiency of the adrenal glands, glaucoma, often a cause of blindness in the aged, and in progressive myopia. Dr. M. X. Sullivan of Georgetown University reported this year to the American Society of Biological Chemists that cortin is also useful in controlling a children's disease called muscular dystrophy which has to do with defective nutrition. Drs. E. C. Kendall, H. L. Mason, and C. S. Myers of the Mayo Foundation investigated the chemical nature of cortin. As is so often the case with natu-

ral products they found it to be complex, but were able to isolate three substances possibly compounds: one similar to glucose, another like glycerol, and the third a crystalline alcohol.

In the drug and medicament field a number of interesting items were reported during the year. Dr. H. W. Dudley, biochemist of the Medical Research Council of London together with Dr. Chassar Moir, London University gynecologist, isolated ergometrine, the active principle of ergot, a fungus plant once widely used in child birth. Ergometrine produces uterus contractions after eight minutes.

An organic compound, benzedrine, has been suggested as a substitute for ephedrine in the treatment of cataplexy, a state of muscular rigidity produced by sudden emotion or shock. It also gives relief in cases of narcolepsy (sleep attacks) and has been used in hay-fever and asthma. Its sponsors, Dr. M. Prinzmetal of Los Angeles and Dr. W. Bloomberg of Boston, state that it has a profound stimulating effect on the higher centres of the central nervous system.

The use of non-habit forming alkaloids in the treatment of narcotic drug addiction is not new. Compounds which have been used for this purpose are hyoscine, a derivative of belladonna and pilocarpine, gotten from a plant called *jarborandi*. Drs. Theophil Klingman and William H. Everts of Ann Arbor have, however, suggested a new method of treatment with these compounds. Hyoscine is given to the patient first and it produces mild delirium together with a loss of memory for all occurrences during the treatment. The patient is kept in this state for some time, apparently until his system adjusts itself to the loss of the habit forming drug. Then pilocarpine is administered which restores consciousness. This treatment was given to 57 drug addicts and, after three and a half years 31 remained cured, 7 relapsed after 3-10 months. The other 19 could not be located.

Dr. K. K. Chen and associates of the Lilly Laboratories of Indianapolis found a new way to combat cyanide poisoning. Their method is to make successive injections of sodium nitrite and sodium thiosulfate. It is claimed that this antidote is 10 times as successful as methylene blue which has been in use for this purpose for several years. In one case the method was successful even though the person had taken the usually fatal dose of five grams of potassium cyanide.

Colloidal solutions of metals and salts such as gold, silver, silver chloride, and so forth have been used as therapeutic agents for many years. Recently Drs. A. E. Osterberg, J. A. Barga, and B. T. Horton of the Mayo Clinic at Rochester, Minn., found that colloidal solutions of lead phosphate were useful in the treatment of cancer. Apparent cures were effected in 7 out of 85 advanced and supposedly hopeless cases. It is essential in the treatment that enough of the lead phosphate be given to produce obvious lead poisoning. The effects of the latter are neutralized later by the administration of calcium compounds which bring about precipitation of the lead in the bony structures of the body. Along this same line, Prof. E. F. Burton of the University of Toronto reported to the Colloid Symposium at Cornell University that colloidal metallic arsenic injected into the veins had brought about apparent cancer cures. The colloidal solution was prepared by dispersing tiny particles of arsenic in water and adding gelatin to stabilize the solution and prevent the precipitation of the arsenic.

Bibliography. The outstanding book of the year is the *Annual Review of Biochemistry* edited by James M. Luck, Stanford University Press. It states, by J. B. Sumner, that 6 enzymes and 2 zymogens have been isolated in crystalline form, and that enzyme chemistry is becoming more and more identified with protein chemistry. The book contains a review of the sugars by Sir James Irvine, long considered an outstanding authority in that field. Another chapter describes the synthesis and constitution of ascorbic acid (vitamin C). There are also good accounts of the sulphur chemistry of interest in biological processes, of the plant pigments (carotenes), and auxin a plant hormone. This review is written mainly for the benefit of workers in the field and is not a popular account. Another book worthy of note is *New Conceptions in Biochemistry* by N. R. Dhar, Indian Drug House, Allahabad, India. Dr. Dhar is considered by many to be the greatest of the Indian scientists.

Prizes and Awards. The Davey medal of the Royal Society was given to Prof. A. Harden, formerly of the Lister Institute, for fundamental discoveries in the chemistry of alcoholic fermentation. Dr. Williard M. Allen of the University of Rochester was rewarded for his work on progesterin, a female sex hormone, by receiving the \$1000 Eli Lilly and Co. prize to youthful biochemists. Dr. Karl Mason, Vanderbilt University and Dr. S. B. Wolbach, Harvard Medical School shared the \$5000 award of the Mead, Johnson Co. for researches on vitamin A. The annual \$1000 prize of the American Association for the Advancement of Science was awarded to Dr. P. W. Zimmerman and Dr. A. E. Hitchcock of the Boyce Thompson Institute for Plant Research for their paper on "Response of Plants to Synthetic Growth Substances."

BIRDS. See ZOOLOGY.

BIRMINGHAM-SOUTHERN COLLEGE. A coeducational institution for higher learning in Birmingham, Ala., founded in 1856. The enrollment for the autumn of 1935 was 805 full-time students, and 395 part-time students, and for the summer session 399. There were 59 faculty members. The endowment amounted to \$696,191, and the income for the year was \$193,639. There were 40,000 volumes in the library. The construction of a \$20,000 addition to the library has provided stack rooms with a capacity of 96,000 volumes. President, Guy Everett Snavelly, Ph.D., LL.D.

BIRO-BIDJAN. A district in the Far Eastern Region of the U.S.S.R. set aside in 1928 for colonization by Jews and made a Jewish Autonomous Territory by the decree of May 7, 1934. Area, 27,000 sq. miles; population, 50,000 (1934 estimate) of whom 10,000 were Jews and the remainder mainly Russians and Koreans.

BIRTH RATES. See FRANCE, GERMANY, GREAT BRITAIN, SPAIN, ITALY, and JAPAN, and the other principal countries under *Area and Population*; VITAL STATISTICS.

BISMARCK ARCHIPELAGO. See NEW GUINEA, TERRITORY OF.

BLACK WIDOW SPIDER. See ENTOMOLOGY, ECONOMIC.

BOBSLEDDING. The Stevens brothers of Lake Placid, N. Y., who were so prominent in the 1932 Olympics, dominated bobsledding in 1935 to a tremendous extent, one or the other of the brothers figuring in three of the four major titles. Curtis P. was driver of the team winning the North

American four-man championship and also drove the sled that took the national four-man title. J. Hubert and F. Paul took the national two-man championship. Hubert and Paul were third in the North American two-man event, which was won by Ivan Brown and A. M. Washbond, representing the Keene Valley A.A. Robert Martin, Hugh A. Varno, and Crawford Merkle were with Curtis Stevens on the four-man sled. Miss Marian Clark of Baltimore and Miss Jean Wyer of Washington topped men rivals in the race down the Mt. Hoevenberg run at Lake Placid for the national A.A.U. junior championship.

BOHEMIA. See CZECHOSLOVAKIA.

BOILERS, STEAM. Despite the existence of many large water power developments and numerous oil engine installations, the latter mostly in smaller units, steam remains the basic medium for stationary power in the United States. Approximately 60 per cent of the electricity produced by utilities and 85 to 90 per cent of that generated in private industrial power plants is produced by steam. However, no reliable and up-to-date statistics are available as to the number and the aggregate capacity of steam boilers in service in this country.

Along with industrial recovery during the past year has come a noticeable increase in the demand for new boilers. These are partly to replace old, less efficient units and partly to meet the need for greater capacity. In many cases new units of several times the capacity are being installed in the space formerly occupied by the old boilers. Higher pressures, higher steam temperatures, larger units, and the inclusion in the steam generating unit of heat recovery equipment, such as economizers and air heaters, are characteristic of the new installations. Aside from general types, little standardization is possible, except for small units, as each installation is tailored to suit the local conditions and the customer's preferences.

In the industrial field, particularly in the process industries, steam pressures of around 400 lb. per sq. in. are now becoming quite general, although higher pressures of 600 to 1400 lb. are also being employed. The largest industrial plant boiler is that now nearing completion at the Rouge Plant of the Ford Motor Company, Detroit. This is guaranteed to deliver 900,000 lb. of steam per hour at 1200 lb. per sq. in. pressure and 925° F. temperature. The unit is of the bent-tube type and will be fired with pulverized coal. None of the later boilers exceed in pressure the 1800 lb. units installed several years ago in the Philip Carey plant at Lockland, Ohio, which still has the distinction of being the highest pressure plant in commercial service in the United States. A few commercial installations abroad and some experimental units in this country exceed this pressure.

While the record for capacity in the field of central station boilers, namely 1,270,000 lb. per hr., is still held by the pulverized-coal-fired, bent-tube boilers at East River Station in New York, some of the new units now under construction or in the proposal stage will closely approach or exceed this capacity and will operate at much higher steam pressure.

These very large units are all fired by pulverized coal but developments in underfeed stokers, such as water cooling and automatic zoned air control should make it possible to increase greatly the output with this type of firing. To date continuous outputs of over 500,000 lb. of steam per hour have been attained with stoker-fired boilers.

The slagging type of furnace is becoming popular for coals of low ash fusing temperature. These slagging furnaces may be either of the intermittent or the continuous tapping type.

Fusion welding (electric) has played a most important part in boiler construction and is now being employed quite generally in the fabrication of boiler drums, in place of riveting, except for relatively low pressures. For very high pressures fusion welded drums of 4 in. plate thickness are now in service and drums of 5 in. thickness are available inasmuch as X-ray equipment of 400,000 volts and capable of 5/4 in. penetration for examining welds, has been installed by some of the boiler manufacturers. Previous to the present high state of development of fusion welding and its acceptance for such work, the drums of very high pressure boilers had to be forged from the solid ingot, which entailed great expense.

While the past few years has seen much progress in boiler feedwater conditioning, new problems are constantly arising and it continues to form the subject of many studies and research.

The problem of combatting carry-over of solids with the steam to the turbine has resulted in the design of several types of steam washers, placed in the boiler drum, in which the steam has to pass through a sheet or spray of clean feedwater. These washers have proven very effective.

Among other problems that are now occupying the attention of both boiler manufacturers and users is the circulation in certain types of boilers at high pressures and high rates of steaming. To this end numerous studies are now being directed.

Sales of stationary power boilers during 1935, as reported to the U.S. Department of Commerce, totaled 1021 boilers of 3,378,966 sq. ft aggregate heating surface (compared with 852 boilers of 2,436,550 sq. ft. heating surface for 1934).

BOLIVIA. A landlocked Andean republic of South America. Sucre is the seat of the Supreme Court and nominally the capital, but La Paz, the largest city, is the actual seat of the government.

Area and Population. The territorial limits of the republic are not definitely fixed, due principally to the boundary dispute with Paraguay. Agreements delimiting parts of the frontiers with Argentina and Peru were still unratified in 1935. The area is variously estimated at from 506,000 to 626,517 square miles, the latter estimate including the disputed Chaco territory. The population at the beginning of 1934 was estimated at about 3,000,000, with Indians comprising 57 per cent of the population; whites, 13 per cent; and mestizos, 30 per cent. Estimated populations of the chief cities in 1932 were: La Paz, 150,898; Cochabamba, 49,612; Potosí, 36,348; Sucre, 26,439; Santa Cruz, 31,691. Spanish is the language of the educated classes; the natives speak Quechua and Aymara. Roman Catholicism is the state religion.

Education. While education is nominally free and compulsory, a large percentage of the population is illiterate. Elementary schools in 1933 numbered 2033, with 161,380 pupils. Secondary schools included 29 colleges, 5 religious schools, and 5 private schools, with a total of 4480 pupils. Eighteen institutions offering university training had 141 teachers and 1682 students. The universities exercised autonomous control of their finances and appointments.

Production. Bolivia's prosperity is largely dependent upon the production and export of tin, which normally constitutes about 80 per cent of the value of all exports. Wolfram, silver, copper,

rubber, bismuth, antimony, lead, wool, hides, cacao, quinine bark, and coffee are the other leading export products. The bulk of the population lives on a bare subsistence level by means of primitive agriculture, the main crops being wheat, barley, oats, corn, rice, and potatoes. With average New York prices for tin the highest since 1927 and the tin export quota of Bolivia advanced by the international tin cartel to 20,994 fine tons, the value of tin shipments increased in 1934 to 106,650,353 bolivianos from 55,634,000 bolivianos in 1933. The 1935 tin quota was reduced to 18,596 fine tons. Despite a marked labor shortage caused by conscription for the Chaco War, import restrictions continued to stimulate the development of domestic manufacturing, especially of tinned milk, textiles, flour, and other foodstuffs. The repeal of the state tobacco monopoly early in 1934 led to an increase in tobacco cultivation and manufactures.

Foreign Trade. The value of Bolivian exports in 1934 was 126,994,000 bolivianos (75,744,000 in 1933) and the value of imports was 72,621,000 bolivianos (41,156,000 in 1933). Although the 1934 exports nearly doubled in value, Bolivia's commercial purchasing power in foreign markets was curtailed by the depreciation of the currency, exchange restrictions, and the government's requisitioning for war purposes of a large share of the foreign exchange received from export payments. The quantity and value of the principal mineral exports in 1934 follow, the figures in parentheses representing metric tons and the others bolivianos: Tin, (23,201) 106,650,353; silver, (162.2) 7,797,086; gold coin and gold in ore, 18,744,735; zinc, (9487) 2,613,816; lead, (11,200) 2,225,261; tungsten, (476) 1,746,644; copper, (1622) 868,367; bismuth, (50) 546,482; antimony, (1201) 517,461. Textiles, wheat, flour, sugar, machinery, iron and steel products, and lumber are leading imports. The United States, Great Britain, and Germany in the order named were the chief sources of imports and the principal export markets were Great Britain, United States, and Germany. Imports from the United States in 1935 were valued at \$2,829,214 (\$5,118,274 in 1934) and exports to the United States at \$362,500 (\$151,999 in 1934).

Finance. The ordinary budget estimates for 1935 balanced at 29,353,000 bolivianos. The largest expenditure item was 7,655,000 bolivianos for the service of the internal public debt contracted after 1930. The payment of interest on foreign and internal loans obtained prior to 1930 remained suspended. In addition to the ordinary budget, there was an emergency budget, estimates of which balanced at 5,895,000 bolivianos in 1935, and an unpublished extraordinary budget covering war and national-defense expenditures. A presidential decree of May 2, 1935, authorized a supplementary budget of 6,610,000 bolivianos to meet additional public works expenditures and the service of the floating debt. The various 1935 budgets went into effect without legislative approval.

The public debt on Dec. 31, 1933, was reported at 383,300,000 bolivianos (279,700,000 on Dec. 31, 1932), of which 158,400,000 bolivianos represented the domestic and 224,900,000 the foreign debt. The boliviano, the unit of currency, is normally worth 36.5 cents in United States currency. Due to the depreciation of the boliviano, however, the official exchange rate was around 4.30 bolivianos to the dollar in 1935 while the open market rate was much higher.

Communications. Bolivia in 1935 had about 1384 miles of railway line, 2400 miles of highway

passable throughout the year, and some 12,000 miles of navigable rivers. The Lloyd Aero Boliviano operated a number of air routes under supervision of the War Ministry, the principal one connecting Cochahamba and Santa Cruz. On June 1, 1935, the Pan American-Grace Airways inaugurated a weekly air-mail and passenger service between Tacna, Peru, and La Paz, the 278 mile trip from the coast to the Bolivian capital requiring only one hour and 45 minutes.

Government. The Constitution of 1880, as amended in 1931, vests executive power in a president elected for four years by direct popular vote and ineligible for reelection until eight years after the expiration of his term. The Congress consists of a senate of 16 members (two for each Department) elected for six years and a chamber of 70 members elected for four years, one-half retiring every two years. The cabinet of six men selected by the President is responsible to Congress. President in 1935, Dr. José Luis Tejada Sorzano.

HISTORY

Chaco War Ended. After three years of sanguinary fighting which cost at least 100,000 lives and impoverished both participants, the war between Bolivia and Paraguay for possession of the Chaco Boreal came to an end on June 14, 1935. A military stalemate and the war-weariness of both nations finally terminated a conflict which all the efforts of the American governments and the League of Nations had been unable to halt. While Paraguay had won possession of the greater part of the disputed territory, the military events of the year clearly demonstrated her inability to invade Bolivia proper and force a conclusive peace.

Military Developments. As described in the NEW INTERNATIONAL YEAR BOOK for 1934, the end of that year found the advancing Paraguayan armies battering at the doors of Villa Montes, the Bolivian general headquarters on the western edge of the Chaco. This strategically important town controlled not only a large part of the valuable oil fields of eastern Bolivia, concessioned to the Standard Oil Company, but also the main road connecting the city of Santa Cruz and the Bolivian Oriente region with the outside world via the Argentine railway terminal at Yacuiba. Gen José Félix Estigarribia, the Paraguayan commander-in-chief, hoped to end the war so far as Paraguay was concerned by capturing Villa Montes and converting it into a strongly fortified barrier against another Bolivian military advance into the Chaco. He apparently realized the futility of attempting to lead his war-worn troops onto the high Bolivian plateau in an effort to force Bolivia's unconditional surrender.

During January, 1935, the Paraguayans made substantial progress towards their goal, capturing one after another of the outlying defensive positions surrounding Villa Montes. In February and March, however, the Bolivians stiffened their defense and with the aid of strong reinforcements repulsed repeated Paraguayan attacks. Towards the middle of March the Bolivian troops took the offensive after a year and a half of defensive fighting and drove their wearied opponents back in the Villa Montes sector. Foiled in his drive on the Bolivian headquarters, the brilliant Paraguayan commander repeated the manœuvre which had proved so successful in the campaign of the previous year against Fort Ballivián. Leaving sufficient troops before Villa Montes to hold the enemy in check, he launched one drive against Boyubí, key

to the Standard Oil Company's refinery at Camiri, and another far to the north across the Parapiti River into Santa Cruz Province in Bolivia proper. On April 6 his veterans forced their way across the Parapiti, capturing the town of Amboro, and struck northward along the road towards Santa Cruz, the capital of Santa Cruz Province. Ten days later they stormed and captured Charagua, an important town of some 10,000 population which was considered the last formidable barrier to the Paraguayan advance on Santa Cruz. In ten days Estigarribia's veterans had seized control of both banks of the Parapiti River for 115 miles and of some 3500 square miles of territory in Santa Cruz Province.

At this juncture the Bolivian commander-in-chief, Gen Enrique Peñaranda del Castillo, launched fierce counter-attacks along the 120-mile front from Villa Montes to Charagua. In the most violent and bloody fighting of the war, the Bolivians during the following month drove the Paraguayans back along the entire front. Charagua was recaptured April 23. On May 6 the Paraguayans retreated to the south bank of the Parapiti, leaving their foes in possession of the major portion of the main road from Santa Cruz to Villa Montes. With the fall of Santa Fé, the last Paraguayan position in the Parapiti River sector, on May 16, the Bolivians announced that they had recaptured more than 7700 square miles of territory in the preceding fortnight.

The tenacity which the Paraguayans repeatedly displayed throughout the war was again evidenced by the resumption of their offensive immediately after such severe reverses. During the last week of May, by desperate fighting, they succeeded in regaining and consolidating their hold on a section of the important Villa Montes-Santa Cruz highway. On June 8, after an eight-day battle, the Paraguayans crushed a Bolivian force of some 5000 troops which had launched an offensive against the strategically important Fort Ingavi, in the north central Chaco. Four days later a truce agreement was signed in Buenos Aires between the Bolivian and Paraguayan Foreign Ministers and on June 14 hostilities ceased. Three years of warfare had demonstrated what neutral military experts had foreseen at the outbreak of the conflict—that the poor state of communications in the Chaco made it practically impossible for either country successfully to invade and conquer the other.

The Peace Negotiations. While the tragic struggle drew towards its conclusion, the League of Nations and the neutral American nations continued their ceaseless efforts for peace. Following Paraguay's indirect rejection of the League's peace plan on Dec. 18, 1934, Secretary of State Hull of the United States proposed that the peace negotiations be taken over by a conference of American states. This proposal was blocked by Foreign Minister Carlos Saavedra Lamas of Argentina, who declined to participate unless the League terminated its efforts.

On Jan. 16, 1935, the Chaco advisory committee of the League Assembly, consisting of representatives of Argentina, Chile, Peru, Mexico, Spain, and Czechoslovakia, met to consider the situation. Holding that Paraguay had violated her obligations under the League Covenant by rejecting the League peace formula, the committee unanimously recommended that the arms embargo against Bolivia be terminated while that against Paraguay should be strengthened. Led by Great Britain and

France, 22 countries accepted the committee's recommendation and lifted in favor of Bolivia the arms embargo previously placed in effect against both belligerents. This drastic action, representing the first League effort to impose sanctions in a mild form, proved ineffective in terminating the war, due chiefly to the attitude of Argentina and Uruguay. Uruguay flatly refused to discriminate against Paraguay by prohibiting exports or transshipments of arms and munitions, while Argentina declared herself legally unable to prevent arms shipments to Paraguay via the internationalized Paraná River.

The League's embargo policy, besides failing to terminate the conflict, provoked Paraguay into announcing on February 23 its withdrawal from the League. The following day the three-month period allowed under the Covenant for the acceptance of the League peace plan expired and the League was confronted with the alternatives of either confessing its impotence or imposing stronger sanctions against Paraguay under Article XVI. When the League's Chaco advisory committee met on Mar. 11-15, 1935, to formulate recommendations for League action, the Argentine, Chilean, and Uruguayan representatives vigorously opposed the application of sanctions against Paraguay. With the exception of Ecuador and Venezuela, whose spokesmen urged resort to sanctions, the other Latin-American states took no positive stand.

The Advisory Committee on March 15 convoked a Special League Assembly for May 20 to consider the Chaco question, but as the League was manifestly unable to take positive action against Paraguay without the cooperation of the neighbor states, the Assembly's advisory committee readily granted the request of Argentina and Chile for permission to initiate new peace negotiations. This request was supported by Brazil and Peru. In addition to the ABCP group, the United States and Uruguay joined in the negotiations which resulted in the truce agreement of June 12, 1935. Meanwhile the extraordinary League Assembly of May 20-21 deferred consideration of the Chaco question to September to give the American governments time to carry out the peace negotiations.

Under the truce agreement of June 12, firing was suspended on June 14 and a neutral military commission, headed by Gen. Martinez Pita of Argentina and including representatives of the other mediating governments, proceeded to fix lines of separation between the two armies. With the ratification of the protocol of truce on June 21, a 12-day truce automatically became effective. On July 1 a peace conference of the six mediating governments and the two belligerents opened at Buenos Aires. Its first act was to prolong the truce until such time as the security measures called for in the truce agreement were carried out. These measures included the demobilization of the two armies, to be carried out within 90 days; reduction of the belligerents' military effectives to a maximum of 5000 men each; prohibition of the purchase of excess war material; and a pledge of non-aggression. The protocol also provided that during the truce and its extension, the lines of separation of the armies would be maintained "under the guarantees of the Peace Conference, for which purpose the neutral military commission will exercise vigilance and control over them." Demobilization of the armies began on July 3 under a schedule fixed by the neutral commission which called for completion of this operation by September 28.

The duties of the peace conference were set forth in Article I of the protocol of truce as follows:

To settle the practical questions which may arise in the execution of the measures of security adopted for the cessation of hostilities

To promote the settling of differences between Bolivia and Paraguay by direct agreement between the parties; it being understood that, should the direct negotiations fail, Bolivia and Paraguay assume through this pact the obligation to settle the Chaco dispute by means of juridical arbitration, forthwith designating the Permanent Court of International Justice of The Hague as arbitrator.

The peace conference will terminate the direct negotiations when in its opinion the time shall have arrived to declare the impossibility of reaching thereby a definite solution; in this event, it will proceed to the question of an arbitral compromise to be concluded between the parties, the peace conference being unable to terminate its functions as long as the arbitral compromise is not definitely agreed upon.

To promote, when it is deemed opportune, the agreement between the parties relating to the exchange and repatriation of prisoners, bearing in mind the practices and principles of international law.

Establishment of a system of transit, trade and navigation, having in view the geographical position of the parties.

To promote facilities and agreements of various kinds, designed to encourage the development of the belligerent countries.

The peace conference will form an international commission which will render an opinion on the responsibilities of any order and any kind arising from the war; if the conclusions of this opinion are not accepted by one of the parties, the Permanent Court of International Justice of The Hague will definitively settle the question.

Although the peace conference opened in a hopeful atmosphere, it was soon deadlocked as a result of the uncompromising positions assumed by the Bolivian and Paraguayan delegations on almost every question at issue. The question of the exchange and repatriation of war prisoners proved an insurmountable obstacle. The Bolivian delegation demanded the immediate exchange of all war prisoners as a preliminary to negotiations on other issues. Paraguay in July released 10,000 Bolivian prisoners without waiting for an agreement, but announced that she would hold about 28,000 additional prisoners in camps near Asuncion until a peace settlement had been definitely agreed upon. Bolivia, with only a few thousand Paraguayan prisoners, was in no position to enforce her demand. In the middle of August, however, Bolivia threatened to suspend demobilization unless Paraguay released the Bolivian war prisoners immediately. Unable to make progress in the face of these obstacles, the conference suspended plenary sessions indefinitely on August 17, while informal negotiations were continued. Thereafter Bolivian-Paraguayan recriminations grew increasingly bitter and Paraguay lent powerful support to a scheme for the secession of Santa Cruz and Beni Provinces from Bolivia and the establishment of a new republic.

Meanwhile the eternal party struggles for political power, which had been suspended during the war, broke out with renewed fury in Asuncion and La Paz. Although the terms of both President Ayala of Paraguay and President Tejada Sorzano of Bolivia were due to expire in 1936 and both Constitutions made the Presidents ineligible for reelection, the partisans of both executives were preparing to retain them in office by amending the Constitutions or otherwise. Opposition groups strove equally hard to overturn the existing governments. With all factions striving to gain partisan advantage from developments at the peace conference, the Bolivian and Paraguayan delegations there feared to make the slightest concession for fear such action would expose their governments to further partisan attacks. Moreover, dur-

ing August, most of the Bolivian and Paraguayan representatives returned to their capitals, apparently to mend their political fences at home. The struggles of the Argentine, Brazilian, and Chilean delegates for economic and political advantages in Bolivia and Paraguay added to the difficulty of reaching an agreement.

Resuming its formal meetings on September 20, the peace conference took up once more the problem of establishing an international commission to determine the responsibility for the war. A tentative agreement reached on this issue August 3 was not placed in effect as it was feared that the attempt to fix responsibilities would render an agreement more difficult. On September 28 the conference voted to establish a commission of three, to be headed by a jurist from the United States nominated by the Supreme Court at Washington. Bolivia and Paraguay were each to request another American government to appoint the two other members. These decisions were embodied in a protocol made public in Buenos Aires October 21. The commission of investigation was to start work within 90 days. If its decision was not accepted by the parties within 30 days, the question was to be submitted to the Permanent Court of International Justice at The Hague. At the end of 1935 the commission had not yet been formed.

At the same time the neutral delegates decided to attempt to reach a solution of the basic territorial dispute independent of the Bolivian and Paraguayan delegations, whose interminable disputes had prevented any progress. On October 23 the conference submitted to the belligerent delegations its formal proposals for a definitive settlement. While the peace formula was kept secret by the conference, the terms were gradually revealed from Bolivian and Paraguayan sources. According to these, the formula called for the division of the Chaco Boreal by a line extending from Bahía Negra on the Upper Paraguay River to the Pilcomayo River at its intersection with the 22d parallel. Paraguay was to grant Bolivia a free port at Puerto Casado, midway between Asunción and Bahía Negra, and the use of the narrow-gauge railway which extends some 200 miles westward into the Chaco from Puerto Casado. Roads linking the railway terminus with points in Bolivian territory were to remain open to both Bolivian and Paraguayan traffic. The signing of the peace formula was to be followed by the release of all war prisoners, the renewal of diplomatic relations, ratification of the non-aggression clause of the June 12 pact of truce, and the conclusion of an agreement establishing guarantees for the maintenance of peace for five years.

The conference's peace formula was rejected outright by both parties. Paraguay insisted that the final boundary line should coincide roughly with lines of military occupation as fixed by the neutral military commission following the truce of June 12. Bolivia, demanding a more extensive waterfront on the Paraguay River, held out for a frontier line extending from Fort Olimpo on the Paraguay River at latitude 21° to Fort Linares on the Pilcomayo River (see map in 1934 YEAR BOOK, p. 90).

Meanwhile the neutral military commission had returned from the Chaco on October 7, having carried out its mission of supervising demobilization of the two armies and fixing the lines of separation between them. On the strength of the commission's report, the conference on October 28 adopted a resolution declaring the Chaco War at an end. The following day Argentina announced the termination

of her neutrality measures and authorized the resumption of normal trade across her northern frontiers with Bolivia and Paraguay. The other neighboring nations followed suit soon afterward. During the remainder of the year the peace conference struggled unsuccessfully with the issue of the exchange of war prisoners and no progress was made toward settlement of the territorial question.

See ARGENTINA, CHILE, and BRAZIL *under History*; LEAGUE OF NATIONS.

Internal Developments. The political struggle in La Paz, which broke out with renewed force upon the conclusion of the June 12 truce in the Chaco, revolved about the somewhat anomalous position of President José Luis Tejada Sorzano. Dr. Tejada Sorzano, then Vice President, assumed the Presidency on Nov. 28, 1934, when President Daniel Salamanca was forced to resign. Subsequently the Bolivian Congress declared null the 1934 elections in which Franz Tamayo of the Genuine Republican party had been elected to succeed President Salamanca upon the expiration of the latter's term on Mar. 5, 1935. This enabled Tejada Sorzano, a Liberal, to continue in office after his constitutional term ended.

On Apr. 12, 1935, President Tejada Sorzano reorganized his cabinet so as to include representatives of the Liberal, Socialist, and Nationalist parties, as well as several non-party men. The Genuine Republicans were excluded. After the convocation of the peace conference in Buenos Aires, the President received much public support for his contention that it would weaken Bolivia's position if a new election were held while the conference was in session. The death of ex-President Salamanca (q.v.) on July 17 removed one of the chief opponents of the acting President and on August 2 Congress voted to extend the mandate of both President and Congress to Aug. 16, 1936.

The Socialists, meanwhile, had withdrawn from the Cabinet on July 27, their places being filled by two army officers. By another cabinet reorganization on September 6, the Nationalists were also eliminated and the Liberals, supported by a few independents and military men, remained in full control of the government. In October it was announced that the convening of Congress would be postponed indefinitely, because of the lack of a quorum in the Senate. This left President Tejada Sorzano with practically dictatorial powers, including the authority to legislate by decree. The municipal elections, scheduled for the second Sunday in December, were postponed indefinitely by the decree of Dec. 1, 1935.

Under the decree of June 5, 1935, the Tejada Sorzano régime established strict governmental control over immigration, including the power to bar the return of Bolivian citizens considered undesirable by the government. All aliens entering the country were obliged to obtain permits before Bolivian consuls abroad could visa their passports. This decree was believed related to the spread of radical propaganda among the Indian masses. Unrest had been stirred also by the rapid rise in prices caused by the depreciation of the currency and the restriction of imports of foreign goods. During March, 1935, prices almost doubled. The government's rigid control of transactions in foreign exchange was tightened by the executive decree of Jan. 24, 1935, in order to provide more funds for purchases of war supplies abroad. Due to this and other circumstances, the American Vice Consul at La Paz reported on Feb. 12, 1935, that a total of about \$700,000 was due to American creditors for

collections. In March a Provisions Control Board began to supervise all imports; from time to time it issued lists of articles the importation of which was prohibited. It also sought to prevent profiteering in necessities by fixing prices on certain commodities and by rationing.

It was reported on September 11 that the Bolivian Government had signed a contract with the Hochschild Company for the construction of one of the largest hydro-electric plants in South America, using the waters of Lake Titicaca. The work was to take five years and to cost about \$25,000,000. In October the government formally charged the Standard Oil Company with having exported oil from its wells in Eastern Bolivia to Argentina by a secret pipe line without paying production fees to the La Paz Treasury. The charge was denied by the company and a commission sent to investigate the matter by the Argentine Government reported that no pipe line across the frontier existed.

BOLL WEEVIL. See ENTOMOLOGY, ECONOMIC.

BONNEVILLE DAM. See DAMS.

BOOTLEGGING. See PROHIBITION.

BOOTS AND SHOES. See SHOE INDUSTRY.

BORNEO. See BRITISH NORTH BORNEO; BRUNET; NETHERLAND INDIA; and SARAWAK.

BOSTON. See MUSIC; WATERWORKS.

BOSTON UNIVERSITY. A nonsectarian institution of higher education in Boston, Mass., founded in 1869. The enrollment for the autumn session of 1935 was 8874, distributed as follows: College of liberal arts, 726; college of business administration, 2680; college of practical arts and letters, 562; college of music, 158; Sargent college of physical education, 210; school of theology, 230; school of law, 448; school of medicine, 248; school of education, 1530; school of religious and social work, 107; graduate school, 360. The enrollment for the 1934 summer session was 1294. The faculty numbered 552. The endowment amounted to \$4,447,249. In the libraries of the University there were more than 175,000 volumes. President, Daniel L. Marsh, Ph D, Litt D.

BOTANY. Botanical research during the past year has been mainly devoted, as heretofore, to plant physiology and its allied subject, phytochemistry, to cytogenetics, and to ecology. In the following summary under appropriate headings it is possible to mention only those papers dealing with broader aspects of the subjects, and those of economic or general interest.

Mention should be made of the sixth International Botanical Congress, held at Amsterdam September 2 to 7.

Cytogenetics. Numerous investigators devoted their attention to the chromosome structure in various plants. M. Simonet (*Ann des Sci. Nat* 16: 229. 1934) made an extensive study of the chromosomes in species of *Iris*. Twenty-two haploid numbers have now been recorded for different species of this genus. Charles E. Allen (*Bot. Review* 1: 269-291. 1935) reported on the cytogenetics of bryophytes and Barbara McClintock (*ibid.* 292-325) on the cytogenetics of maize. F. M. East (*Genetics* 20: 403-451. 1935) reviewed the genetic reactions in *Nicotiana*, covering the questions of compatibility, dominance and phenotypic reaction. C. F. Feng (*Bot. Gaz* 96: 485-504. 1935) presented a genetical and cytological study of species hybrids in Asiatic and American cottons. Judging from the results, the possibility of making fertile hybrids between the two types is remote unless the chromosome difference between them is removed in some way

before crossing. A total of 1708 crosses was made. John H. Schaffner (*Bull. Torr. Bot. Club* 62: 387-402. 1935) made experiments on various monocious and dioecious plants which indicate that any sexual condition of an individual is not determined by Mendelian sex genes but by physiological balances produced through the interaction of the general hereditary potentialities of the cell on one hand and the environmental conditions on the other. The sexual condition of the higher sporophytes thus may change from time to time.

Ecology. H. J. Webber (*Am. Journ. Bot.* 22: 344-361. 1935) presented the results of an ecological study of the Florida scrub vegetation. This is an association of semixerice evergreen shrubs and small trees forming a dense tangle. On account of the sparse evergreen character of the foliage and the bareness of the soil, especially on the margins between the scrub and high pine land, the fire hazard is much reduced. G. E. Nichols (*Ecology* 16: 403-422. 1935) discussed the hemlock-white-pine-northern hardwood region of eastern North America. The three forest regions recognized in this paper coincide in general in their geographical limits with the three temperature provinces recognized by Thorntwaite in 1931 (*Geog. Rev.* 21: 633-655). In connection with the same topic Stanley W. Bromley (*Ecol. Monog.* 5: 61-89. 1935) discussed in detail the forest types of southern New England. Hardy L. Shirley (*Bot. Review* 1: 355-381. 1935) gave a comprehensive account of light and its measurement as an ecological factor. John Phillips (*Journ. Ecol.* 23: 210-246. 1935) analyzed the concepts regarding the climax, or state of dynamic equilibrium, as applied in ecology. He concluded that the only true climax is the climatic one, and that edaphic, biotic and other so-called climax are capable of explanation on this basis.

Morphology. G. E. Smith (*Ann. Bot.* 49: 451-477. 1935) furnished evidence for the existence in many leaves of marked correlation between the direction of the long axes of the stomata and that of the underlying vascular tissue. He suggested that there is often a correlation between stomatal orientation and vein direction. Robert E. Woodson Jr. (*Ann. Missouri Bot. Gard.* 22: 1-48. 1935) presented a study of the inflorescence of the Apocynaceae, and concluded that the dichasial cyme appears to be the primitive inflorescence of the family.

Under this head may also be mentioned the studies in regeneration by Carl D. La Rue (*Am. Journ. Bot.* 22: 486-492. 1935). He found that excised roots of monocotyledons were incapable of regeneration; that seeds of corn, wheat and barley split lengthwise produced roots and shoots, and that embryos of wheat and sorghum, deprived of endosperm, grew into weak, but normal plants. Wheat seedlings from which shoots were removed produced new shoots, but excised shoots of wheat died, while excised shoots of corn, oats, sorghum, etc., developed adventitious roots. Mutilated seedlings showed no capacity for regeneration.

Pathology. Ernest L. Spencer (*Phytopathology* 25: 493-502. 1935) continued his studies on the virus of tobacco mosaic and found that susceptibility to infection was increased by small doses of potassium sulphate, but markedly increased by large doses. J. A. Pinckard (*Journ. Agric. Res.* 50: 933-952. 1935) conducted physiological researches in connection with several pathogenic bacteria that induce cell stimulation in plants. James Johnson and Ismé A. Hoggan (*Phytopathology* 25: 328-343. 1935) offered a descriptive key for plant viruses based on

modes of transmission, whether by sucking insects, or by mechanical means, as grafting or plant extract.

Physiology. The effects of various agents upon plant growth and upon germination of seeds have been studied by many botanists. John M. Arthur and W. D. Stewart (*Contr. Boyce-Thomps. Inst.* 7: 131-146. 1935) found that by using 500-watt Mazda lamps for four hours daily as a supplement to sunlight the rate of growth and flowering of plants in a specially constructed greenhouse was practically equivalent to that in an ordinary greenhouse during the spring months. G. F. Nightingale (*Bot. Gaz.* 96: 581-639. 1935) studied the effects of temperature on growth, anatomy and metabolism of apple and peach roots. The maximum yield of current roots and tops occurred at a temperature in sand of 65° Fahrenheit. According to Roland McKee (*Journ. Am. Soc. Agronomy* 27: 642-3. 1935), the ability of seedlings to recover after having once started into active growth and subsequently dried varies widely. D. M. Simpson (*Journ. Agric. Res.* 50: 429-456. 1935) indicates that ripe cotton bolls contain a considerable proportion of dormant seeds, which germinate freely, however, after a short period of storage. Under ordinary storage conditions, cottonseed deteriorates rapidly after two years. P. W. Zimmerman (*Contr. Boyce-Thomps. Inst.* 7: 147-156. 1935) discussed the anæsthetic effects of CO, CO₂, propylene, butylene, ethylene, and acetylene mixed with oxygen. Ethylene, propylene, and acetylene are most effective on plants, but strangely enough are least so on insects and centipedes. According to László Havas (*Journ. Agric. Sci.* 25: 198-216. 1935) stimulatory effects upon germination and growth were observed in a wide range of dosages upon exposing seeds and seedlings to the emanations from a radioactive mud of Hungarian origin. Harris M. Benedict (*Bot. Gaz.* 96: 330-341. 1935) found that ultra-violet radiations between 2900 and 3100 Å, which have been proved to cause an increase in the calcium and phosphorus content of the blood of animals, produce in plants an increase in calcium but no definite result in the case of phosphorus. F. W. Went (*Bot. Review* 1: 162-182. 1935) studied the effects of auxin, the growth hormone, on plants. W. E. Loomis (*Ann. Bot.* 49: 247-272. 1935) observed that nitrogen synthesized to organic forms in the roots is normally moved upwards in the phloem, but the escape of organic nitrogen into the transpiration stream is not impossible. Walter S. Eisenmenger (*Plant Physiol.* 10: 1-26. 1935) found that organic aluminum compounds exert a distinct toxic effect upon corn, soy, and buckwheat, increasing with the increase of concentration. H. L. Francke (*Flora* 129: 1. 1935) made a detailed study of the symbiotic relationships of *Monotropa hypopitys*. The symbiosis is obligate, since sterile seeds fail to germinate, although a low rate of germination is obtained in presence of the fungus, which is probably a Boletus.

Taxonomy. A study of Elæagnaceæ by Aven Nelson (*Am. Journ. Bot.* 22: 681-683. 1935) led the author to conclude that the three genera into which this family has been divided (Elæagnus, Shepherdia and Hippophaë) may be better included in the single type genus. Charles J. Chamberlain (*Bot. Review* 1: 183-209. 1935) discussed the position of the gymnosperms from the taxonomic, morphologic, and cytogenetic standpoint. Albert C. Smith and Minna F. Koch (*Brittonia* 1: 479-543. 1935) presented a monograph of the South American composite genus *Espeletia*, which is

characteristic of the páramos or alpine meadows of the high Andes. The paper is a study in phylogenetic taxonomy. Henry K. Svenson (*Am. Journ. Bot.* 22: 208-267. 1935) catalogued the flowering plants collected by the Astor expedition of 1930 to the Galapagos and Cocos Islands, with a brief account of the vegetation.

At the general meeting of the Linnæan Society of London in April, 1935, a symposium was held on the species problem in phanerogams, and it was suggested that the word species should be eliminated as a scientific term, and should be replaced by some such word as morph or phenotype. There was general agreement that in view of the modern importance of cytogenetic and other factors the investigation of species should be undertaken with a much more complete analysis of a wider range of characters.

Necrology. Hugo de Vries (q.v.), professor of botany for many years at the University of Amsterdam, and first proponent of the theory that new species arise by sudden changes or mutations; Benjamin Lincoln Robinson, curator for 43 years of the Gray Herbarium of Harvard University; Asa Gray, for 35 years professor of systematic botany at Harvard; Elam Bartholomew, curator of the mycological herbarium at Kansas State College.

Bibliography. H. S. Jennings, *Genetics*, W. W. Norton Co., N. Y.; H. T. MacBride and G. W. Martin, *The Myxomycetes*, The Macmillan Co., N. Y.; *Monocotyledons*, Vol. II, "The families of flowering plants," The Macmillan Co., N. Y.; *The Gramineæ* (A study of cereal, bamboo, and grass), Cambridge University Press; Homer D. House, *Wild Flowers*, The Macmillan Co., N. Y.; *The Botanical Review*, edited by H. A. Gleason and E. H. Hall. Falling of the New York Botanical Gardens, began publication during the year.

BOULDER DAM. See DAMS; UNITED STATES under *Administration*.

BOUNDARY DISPUTES. See ARGENTINA, BOLIVIA, CHILE, COLOMBIA, ECUADOR, ETHIOPIA, ITALY, MANCHOUKUO, MONGOLIA, PARAGUAY, and PERU, under *History*.

BOURGET, bōōr'zhā', PAUL. A French novelist and critic, died in Paris, Dec. 24, 1935. Born in Amiens, Sept. 2, 1852, he was educated at the Lycée at Clermont and the Collège Sainte-Barbe and the École des Hautes Études, Paris. His literary début was made as a poet in 1872 with the publication of *Au bord de la mer*, but not until 1883 did his star begin to ascend, and then with the publication of his essays—*Essais de psychologie contemporaine*, in which his analytical powers, later to be used so successfully in his novels, were introduced. These were followed by *Nouveaux essais* (1885), and three volumes of *Études et portraits* (1888-89, 1906), a description of his visit to England, in which Bourget appears in his own words as "a moralist of the decadence," "a maniac of psychology," and "a passionate lover of analysis."

His visit to England brought forth his first novel, *L'Irréparable* (1884), which was followed by *Cruelle énigme* (1885); *Mensonges* and *André Cornélis* (1887). *Le disciple* (1889), considered one of his outstanding works, together with the two last-named books were compared by some critics with the works of Balzac and Flaubert. The appearance of *Physiologie de l'amour moderne* (1890) and *Sensations d'Italie* (1891), a delightful travel book, enhanced his reputation, and at the early age of 41 he was elected to the French Academy. In 1895 he was made an officer of the Legion

of Honor. His novels have been described as a seductive if somewhat sickly product of the hot-house of an outworn civilization, uniting intellectual keenness with morbid sensitiveness, dealing by preference with the cosmopolitan types of that low life which is usually called "high." His works of the 10 years 1890 to 1900 were concerned mostly with proving the incompatibility of passion and love, and include *La Terre promise* (1892), *Cosmopolis* (1892), *Un scrupule* (1893), *Une Idylle Tragique* (1896), *La duchesse bleue* (1898), *Drames de famille* (1900). After a visit to the United States in 1893, he wrote *Outre-Mer* (1895).

After 1900, Bourget became closely associated with the more conservative Catholic group, and his novel *L'Étape* (1902) was said by Brandes to be the one with which "he enters into the ranks of Catholic zouaves." His chief works of this period, while not always approved by the critics, became standard Catholic novels, and include *Un divorce* (1904), and *L'Émigré* (1907). In 1914 he wrote *Le Démon de Midi*, a valuable Catholic thesis-novel. His style was uneven, affected, incorrect at times, but capable of a terse simplicity that unites strength and beauty to a rare degree. His later work, though characteristic of his style, was somewhat thin and deteriorated in quality from his early successes.

Besides being a novelist of repute, he also won renown for his critical work, which in part was the cream of late 19th century French insight, the most representative being *Pages de Critique et de Doctrine* (1912). His attempts at writing for the theatre were not very successful. *Le Tribun* (1911), though interesting was poorly received, and *Le Crise* (1912), written in collaboration with André Beaumier, was still inferior. In 1913, his *Complete Works* (up to that time) were issued in 12 volumes. In 1922 the post of curator of the Palace of Chantilly was given to him, and in the following year he was made a Commander of the Legion of Honor.

Among other and later works of his may be mentioned. *La vie inquiète* (1874), *Edel* (1878), *Les aveux* (1882), all poetry; *Pastels* (1889), *Nouveaux Pastels* (1891), *Un Saint* (1892), *Un Crime d'amour* (1886), *Un Cœur de femme* (1890), *Voyageuses* (1897), *Recommencements* (1897), *Complications sentimentales* (1898), *Un Homme d'affaires* (1900), *Le Fantôme* (1901), *Monique* (1902), *L'Eau profonde* (1904), *Les Deux Sœurs* (1905), *Les Detours du cœur* (1906), *La Dame qui a perdu son peintre* (1908), *Sociologie et littérature* (1909), *La Barricade* (1910), *L'Envers du décor* (1911), *Un Cas de conscience* (1911), *Le Sens de la mort* (1915), *Lasarine* (1917), *Némésis* (1918), *Le Justicier* (1918), *Anomalies*, stories, (1920), *Laurence Albane* (1920), *L'écuyère*, stories, (1921), *Un Drame dans le Monde* (1921), *Nouvelles Pages de Critique et de Doctrine* (2 vols., 1922), *La Géole* (1923), *Cœur pensif*, ne sait ou il va (1924), *Confits intimes*, short stories (1925), *Le Danseur Mondain* (1926), *Nos actes nous suivent* (1927), *Le tapin*, *L'Enfant de la morte* (1928), and *Quelques témoignages* (1928).

BOURNE, böörn or börn, FRANCIS, CARDINAL. An English prelate of the Roman Catholic Church, died in London, Jan. 1, 1935. Born at Clapham, London, on Mar. 23, 1861, he was educated at St. Cuthbert's College, Ushaw; St. Edmund's, Ware; St. Sulpice, Paris, and at the University of Louvain, being ordained priest at Louvain in 1884. As a curate, he served at an orphan school in Blackheath, at St. Mary Magdalen's in Mortlake, and

at an orphanage in West Grinstead, Sussex. In 1889 he was appointed Rector of the Southwark Diocesan Seminary, which position he held until 1898. He went to Rome in 1895, where he was made Domestic Prelate by Pope Leo XIII. The next year he was elevated to the Bishopric, becoming titular Bishop of Epiphania and Coadjutor Bishop of Southwark, with the right to succession. Following the death of the incumbent, he became Bishop of Southwark and Ordinary in 1897, having jurisdiction over the counties of Kent, Surrey, and Sussex. In 1903, he succeeded Cardinal Vaughan as Archbishop of Westminster, which diocese took precedence over every other one in the country. In 1911 he was raised to the Cardinalate with the title of St. Prudeniziana, the name of Cardinal Wiseman's old titular church in Rome.

At the beginning of his archepiscopate, Bourne was faced with the possibility of the withdrawal of aid to non-provided or voluntary schools, as one of the election promises of the successful Liberal Parliament of 1905 was the undoing of such existing legislation. Backed by the Roman Catholic hierarchy of the country, the Archbishop opposed the Minister of Education successfully three times in the presentation of a bill hostile to the schools.

The Cardinal-Archbishop was always interested in the Eucharistic Congress and attended many of them, visiting the United States in 1910 after the Congress at Montreal. One of the most important events of his Cardinalate he considered the Congress held in London in 1908. During the World War, he was actively engaged in supplying chaplains for the fighting forces, and, being more than interested in the spiritual welfare of the men, made frequent trips to the troops in Belgium and France. In 1921 he aroused the antagonism of the Irish because he condemned the Sinn Féin riots and favored Home Rule. His opposition to the general strike of 1926 was largely instrumental in its failure, for on the first Sunday of the strike, he spoke strongly against it, saying that it had no moral justification and was a sin against obedience. Nevertheless, he was ever a friend of organized labor.

On the 500th anniversary of the death of Joan of Arc at Rouen in 1311, he was appointed Papal Legate, the first English Cardinal to be so honored. In Vatican Circles, the Cardinal was given credit for aid in formulating the principles upon which the government of Mussolini and the Holy See based their negotiations for the establishment of the Vatican as an independent Papal State, as for years he had contended that "civil independence of the Holy See might adequately be secured without detracting from the essential unity of the Kingdom of Italy."

He was known as an able administrator, and under his rule the Church in England grew to new proportions. He founded the National Catholic Congress, and established many churches in London for the convenience of his flock. The Cathedral at Westminster was dedicated early in his régime, and the debt considerably reduced. In 1934, he celebrated his golden jubilee as a priest.

Apart from reprinted pamphlets of his public addresses, his publications were limited to *Ecclesiastical Training* (1927); *Congress Addresses* (1929), addresses made at various meetings of the National Catholic Congress, and *Occasional Sermons* (1930).

BOWDOIN COLLEGE. An institution of higher education for men in Brunswick, Me., founded in 1794. The enrollment for the autumn session of 1935 was 620. There were 53 faculty members and five Teaching Fellows. The produc-

tive funds of the college amounted to \$7,692,000, and the income for 1934-35 was \$568,000. During 1934-35 over \$1,000,000 was added to the endowment fund from the estates of Charles P. Kling, John Hubbard, and John C. Coombs. The library contained more than 100,000 volumes. President, Kenneth Charles Morton Sills, LL.D.

BOWLING. Don Brokaw, 116-pound entry from Canton, O., was the surprise of the bowling season, one which showed increased interest in the sport in 1935. Brokaw won the national singles crown at the American Bowling Congress in Syracuse in the spring, bowling 733, a total only surpassed once in the last 10 years of the game. Brokaw's scores were 246, 242, and 245. Ora Mayer, of San Francisco, took the all-events championships, the first time a major title had gone to California.

Akron gained the doubles laurels with the team of Harry Souers and Clyde Sumerix and the five man event was captured by the Wolf's Tire Service Company five of Niagara Falls, N. Y. Hank Marino, of Milwaukee, succeeded Otto Stem jr. of St. Louis as national match champion, beating Stein in a 120-game series. Miss Marie Warmbier of Chicago dominated the women's play, winning the national match game, the women's international singles and the women's international all-events titles.

BOXING. The pugilistic sport, moribund to a great extent in the five previous years, suddenly was raised into a paying trade again in 1935 and indications were that 1936 would be livelier. Arenas were jammed for fights, ticket sellers beamed with delight, gymnasium proprietors gaped at the hordes of youths anxious to learn the game. And the "million dollar gate," almost considered something legendary, returned. And it all happened because of a big Negro boy from Alabama, by way of the automobile factories of Detroit—Joe Louis. He had come sauntering into rings in 1934 and at the close of the year was mentioned as a possibility for heavyweight honors. At the end of 1935 he was considered the uncrowned heavyweight champion of the world, and one of the finest, if not the finest fighting machine in the history of boxing.

Louis engaged in 14 fights in 1935, winning all of them and remaining undefeated in his entire professional career, which started July 4, 1934. He scored 12 knockouts in the 14 fights and easily outpointed his opponents in the other 2. His last 9 fights of the year were knockout triumphs, occupying only a total of 31 rounds. In his last four appearances he stopped Primo Carnera, former champion of the world, in 6 rounds; King Levinsky, feared for five years by most of the heavyweights, in 1; Max Baer, dethroned as heavyweight champion in June by James J. Braddock, in 4; and Paulino Uzcudun, the ancient Basque who had never been floored much less stopped in 10 years of campaigning, in 4, also.

The 21-year-old Negro displayed a punch unequalled since Jack Dempsey's time, but with a finesse and accuracy surpassing Dempsey's best blows. And Louis showed boxing skill worthy of Gene Tunney. None of his 1935 opponents, with the exception of Baer, struck him a clean blow. Baer's punch, struck after the bell ending the second round, was taken with disdain by Louis. This Baer-Louis fight, staged by Michael Strauss Jacobs at the Yankee Stadium in New York late in September, attracted 95,000 persons and a gross sum of \$1,000,000, the first since Dempsey's second battle with Tunney and the first in New York since the Dempsey-Sharkey fight in New York in 1927.

The Negro attracted huge crowds wherever he fought, drawing \$360,000 for his battle with Carnera in June in New York (\$155,000 more than the gate for the surprising defeat of Baer by Braddock) and drawing \$200,000 in Chicago in August for his one round demolition of Levinsky. Louis's share of the 1935 campaign was \$368,000.

The skill and drawing power of the Negro was just the adrenalin the fight game needed and other fighters shared in the profits and the public interest.

Seven new world's champions were crowned in the year. Jimmy Braddock, on the New Jersey relief rolls in January, was heavyweight champion in June. Braddock, a former challenger for the lightweight honors, was inserted into the heavyweight eliminations to select a Baer opponent and, after Carnera skipped to the Jacobs-Louis camp, was given the match. Baer was a one to five favorite at the ringside but Braddock clearly outpointed the champion, who didn't seem to be able to punch at all.

Barney Ross, the Chicago fighter, traded titles during the year. He abdicated the lightweight throne in April and relieved Jimmy McLarnin of the welterweight championship in New York in May. Tony Canzoneri, who had been beaten for the title by Ross, retrieved the lightweight championship in May, by beating Lou Ambers, considered the outstanding contender for the laurel. Bob Olin, who had taken the lightweight championship late in 1934, lost his title in his first actual defense, losing to John Henry Lewis, Arizona Negro, in St. Louis in the autumn. For the first time in almost a decade the muddled bantamweight championship was almost straightened out. Al Brown, the Panama Negro, was beaten by Balcazar Sangchilli, a Spaniard, for the championship, but there were rumors about the inability of both and Lou Salica and Sixto Escobar met in New York for the title, to be recognized by the boxing authorities of the United States. Salica won a disputed decision but in a return bout two months later, indoors, the clever Puerto Rican reversed the decision and became champion.

On the first day of 1935, Teddy Yarosz, middleweight champion (American edition, disregarding the skillful and bald Marcel Thil who fought only in France) was knocked out in an over-the-weight bout by Babe Risko, a Polish bellhop from Syracuse. Risko trailed Yarosz for the rest of the year, finally removing Yarosz's title in Pittsburgh. Risko was stopped in one round in New York in December by England's Jock McAvoy in a non-title bout. Small Montana succeeded Midget Wolgast as flyweight champion, and Freddie Miller, lefthander, retained his featherweight honors through virtue of a triumphant tour of Europe and the British Isles.

BOY SCOUTS OF AMERICA. An organization incorporated in 1910, and chartered by Congress in 1916, to develop the character of boys and train them for the duties of adult life by influence brought to bear in their work and play. Each boy, on joining the organization, takes the scout oath, admonishing him to keep himself "physically strong, mentally awake, and morally straight." The movement is nonsectarian and without military or political connection.

The membership as of September, 1935, numbered 1,006,339, of whom 725,691 were scouts, 53,570 cubs, and 227,078 scouters and cubbers (adults connected with the movement, whether as scoutmasters, counselors, or committee members).

There were 12 regional districts under the direct supervision of the national scout executives and subdivided into 543 local councils.

Among the foremost scout activities are camping and hiking, nature study, sea scouting, and many kinds of athletics, and crafts, such as swimming, first aid, signaling, knot-tying, and bridge making. Successive ranks in membership—tenderfoot, second, and first class—are achieved by passing tests, graded in difficulty. Merit badges, more than 100 in number, may be attained by the scout of first class rank by meeting requirements for each; they cover proficiency in pursuits both of the useful and the hobby type. In order to attain higher ranks in scouting the boy must meet requirements for length of service, develop his leadership ability, and maintain his scout obligations. These and his earning a certain number of merit badges entitle him to the ranks of star, life, and eagle scout.

The official magazine for boys is *Boys' Life*, and for scout leaders, *Scouting*. The national officers in 1935 were: president, Walter W. Head; treasurer, Lewis Gawtry; national scout commissioner, Daniel Carter Beard; chief scout executive, James E. West; deputy chief scout executive, George J. Fisher. Headquarters of the national council are at 2 Park Avenue, New York City.

BRAZIL. A federal republic of South America, comprising 20 States, the Federal District, and one Territory. Capital and largest city, Rio de Janeiro.

Area and Population. With an estimated area of 3,275,510 square miles, Brazil had a population estimated at 47,794,874 in 1935 (30,635,605 at the 1920 census). The people of southern Brazil are chiefly of European descent, with Portuguese, Italian, Spanish, and German strains dominating, but there is a strong infusion of Negro and Indian blood in the north. The chief cities, with their approximate 1933 populations, were Rio de Janeiro, 1,500,000 (1,700,532 in 1935); São Paulo, 1,052,541 (1,151,249 in 1935); São Salvador, 852,081; Recife, 438,159; Belem, 300,233; Porto Alegre, 293,820; Bello Horizonte, 145,206; Fortaleza, 136,386; Maceió, 120,098; Niteroy, 119,297; Curitiba, 110,851. Immigrants in 1933 numbered 46,071; emigrants, 16,987. The language is Portuguese, but Italian and German are widely used in the south.

Education. The bulk of the population is illiterate, although education is free and, in seven States, nominally compulsory. President Vargas stated in 1933 that only 487 out of each 1000 Brazilian children enter primary schools and that barely 30 complete the primary grades. The children of the present generation are said to be growing up only 37.7 per cent "literate." In 1931 there were 33,049 primary schools, 1145 high schools, 87 colleges, 211 normal schools, and 943 special schools, with a total of 2,284,883 pupils.

Production. Over 70 per cent of the working male population is engaged in agriculture; coffee, cacao, sugar, and tobacco are the principal crops. The value of agricultural production in 1934 was 6,022,000,000 milreis (5,104,000,000 in 1933); of industrial production, about 6,000,000,000 milreis (5,500,000,000 in 1933). Brazil is the world's largest producer of coffee, which annually accounts for 60 to 75 per cent of the value of all exports. During the crop year ended June 30, 1935, Brazil delivered 14,859,421 bags (1 bag equals 132 lb.) out of total world coffee deliveries to consumption of 22,679,955 bags. In 1933-34, total world deliveries were 24,452,460 bags and Brazil's share was 16,-

062,870 bags. Brazil sells the bulk of its coffee output to the United States (11,561,955 bags in 1934-35 and 12,092,460 in 1933-34). The collapse of coffee prices from 24.8 cents per lb. in March, 1929, to about 7 cents in October, 1931, profoundly disrupted Brazil's economic system, the prosperity of which is largely dependent upon profitable prices for coffee. To maintain coffee prices, the Federal Government undertook to burn the coffee produced in excess of the demand, the destruction programme being financed by a tax of 15 shillings a bag on new coffee. Up to the end of 1934 about 34,000,000 bags had been destroyed. New coffee plantings were restricted also. While these measures prevented the complete collapse of the coffee industry, the price made only a moderate recovery to 10 cents a lb. during 1934 and dropped again in 1935 when estimates placed the 1935-36 crop at about 22,000,000 lb.

Production of other crops in 1934 (in bags of 132 lb.) was Corn, 108,000,000; rice, 25,000,000; sugar, 18,667,000; cacao, 1,500,000. Taking advantage of reduced acreage in the United States and higher world prices, Brazil increased her 1934-35 cotton crop to 1,591,000 bales (of 478 lb.) from 969,000 bales in 1933-34. Bananas, oranges, yerba maté, wheat, manioc, rubber, livestock, and timber are other products. Due to the protective tariff and exchange difficulties, domestic manufactures expanded rapidly during the world economic depression, particularly the production of textiles, chemicals, furniture, and cement. Manufacturing industries employed 510,000 workers in 1933, textile mills accounting for 39 per cent of the total. The number of industrial establishments was estimated at 50,885 in 1930. On Jan. 1, 1935, there were 338 cotton spinning and weaving mills, with 2,532,342 spindles and 81,158 looms. Mineral and metallurgical production in 1934 (in metric tons) was: Coal, 622,000; manganese ore (exports), 2,300; iron ore (1933), 30,000; pig iron and ferroalloys, 57,000; steel ingots and castings, 62,000. Gold output in 1934 was 4200 kilograms.

Foreign Trade. Imports in 1934 were valued at 2,502,785,000 milreis paper (2,165,254,000 in 1933) and exports at 3,478,903,000 milreis (2,820,271,000 in 1933). Imports were 15.6 per cent larger than in 1933 and exports 23.4 per cent larger. The United States furnished 23.6 per cent of the total 1934 imports (21 per cent in 1933); United Kingdom, 17.2 per cent (19.4); and Germany, 14 per cent (12.1). Of Brazil's total exports, the United States took 39.3 per cent (46.4 in 1933); Germany, 13 (8.1); and the United Kingdom, 12 (7.5). The value of the chief 1934 exports was (in contos, or 1000 milreis): Coffee, 2,114,521; raw cotton, 456,198; cacao, 149,833; animals and animal products, 256,443; yerba maté, 71,526; oil producing seeds, 66,716; oranges, 56,189; tobacco, 52,208. Machinery and tools, wheat, iron and steel, chemicals, drugs, etc., are the principal imports.

U.S. statistics showed imports from Brazil in 1935 of \$99,687,061 (\$91,484,306 in 1934) and exports to Brazil of \$43,617,614 (\$40,375,070 in 1934).

Finance. Under the Constitution of 1934 the fiscal year, ending March 31, was changed to coincide with the calendar year, effective in 1935. For the nine-months' period from April to December, 1934, the official Tribunal de Contas reported Federal revenues of 1,971,145,000 milreis (paper) and expenditures of 2,099,250,000 milreis, the deficit totaling 128,105,000 milreis, exclusive of extraordinary expenditures of 728,295,000 milreis covered by credit operations. The budget for the calendar

year 1935 estimated general revenues at 2,169,577,000 milreis and expenditures at 2,691,684,487 milreis, the anticipated deficit being 522,107,487 milreis. The 1935 figures include ordinary and extraordinary estimates.

The Federal public debt on Dec. 31, 1934, totaled 15,991,300,000 milreis (foreign, 9,358,200,000; domestic, 6,633,100,000), compared with 15,248,700,000 on Mar. 31, 1934. The foreign debt as of Dec. 31, 1934, was subdivided as follows: £106,450,712; \$174,197,045; gold francs, 228,989,500; paper francs, 296,736,900. The average exchange rate of the paper milreis in U. S. paper dollars was \$0.0796 in 1933, \$0.0848 in 1934.

Communications. Brazil in 1934 had about 22,280 miles of railway line, of which all except 4219 miles were owned by the Federal Government or the States. Electrification of the railways has progressed rapidly. Highways extended some 90,650 miles. In 1935 seven companies were operating commercial air lines aggregating 12,468 route miles. In addition the Brazilian Army Air Mail service was operating 4722 miles of line in 1935. During 1934 the Army mail planes flew 382,631 miles and carried 22,990 lb of mail. There are some 40,300 miles of navigable rivers. The net tonnage of vessels in the overseas trade entering Brazilian ports with cargo and in ballast during 1934 was 44,533,000; vessels cleared, 44,498,000 tons.

Government. The Constitution of the Second Republic, adopted July 16, 1934, vests executive power in a President elected for four years by secret vote of literate male and female citizens. The President is not eligible for reelection. Legislative power is concentrated mainly in a Chamber of Deputies of 300 members (250 elected by direct popular vote and 50 representing occupational and professional syndicates). There is also a Senate of 42 members (2 from each State), elected for eight years. The occupational representatives are chosen indirectly through occupational associations constituted for the purpose. The Constitution gives the Federal Congress large powers for the regulation of industry. The State governments exercise a large degree of autonomy, including the right to levy export taxes up to 10 per cent *ad valorem*. National defense, the income tax, and other obviously national functions are reserved to the Federal Government. Political parties are organized mainly on a State basis, there being no truly national political organizations. President in 1935, Dr. Getulio Dornelles Vargas of Rio Grande do Sul, who assumed office as Provisional President Nov. 3, 1930, following a successful revolution, and was elected Constitutional President for four more years on Oct. 14, 1934.

HISTORY

Political Developments. Although Brazil during 1935 continued the economic recovery inaugurated in 1934, there was no abatement of social unrest. The rapid growth of Fascist and ultra-radical political movements likewise continued, presenting the Vargas Government with its most pressing internal problem. Absorbed in the battle against the economic depression and in internal political strife, the Vargas régime up to 1935 had carried out only partially its promises of fundamental reforms in the political and economic fields. The agricultural system, based upon the production of coffee and other money crops for export by a comparatively few wealthy, landowning families, kept the masses of the rural population in a state of miserable peonage. The economic condition of the industrial workers, although better than

that of the *colonos* (peons), was distinctly worse than in many European countries which had sent class-conscious emigrants to man the machines in Brazil's rapidly expanding industrial establishments.

Among the rural and urban workers, deprived of any appreciable stake in the existing system and compelled to bear the brunt of the economic depression, the years after 1930 witnessed a rapid spread of ultra-radical and Communist sentiment, from which the lower ranks of the army were not immune. Radical sentiment found its chief expression in a growing number of industrial strikes, in which members of the illegal Communist party played a leading part. The growth of radicalism was matched by the rapid development of Fascist organizations, of which the so-called Integralist Action—an intensely nationalistic, anti-Communist, and pro-Catholic group—was easily the most important. By 1935 the Integralists claimed to have 200,000 members in their green-shirted private militia, units of which were organized in seven States and the Federal District. The movement was said to have between 500,000 and 700,000 followers.

As the first truly national organization in Brazil, the Integralist movement promised to inaugurate a new period in Brazilian politics. It originated in São Paulo, following the unsuccessful Paulista counter-revolution of 1932, and was designed primarily to overthrow the Vargas Government, which then showed a radical tendency. The rapid growth of the Integralist militia, coupled with the increasingly frequent clashes between Integralists and radicals, led the Federal Congress to pass the National Security Law, signed by President Vargas Apr. 5, 1935. The law provided that "only the State has the prerogative to form a militia of whatever nature" and authorized the imprisonment of Fascist and radical leaders under certain circumstances. However, the law did not prohibit the wearing of colored shirts and Fascist emblems and the Integralists declared that, since they were not armed, the law did not apply to them. Their leader, Plinio Salgado of São Paulo, asserted the Integralists would resist any attempt to dissolve the organization and none was made during the year, although Congress on November 21 petitioned the government to dissolve it as a menace to public order.

Events confirmed the fears of the radicals that the National Security Law was aimed principally at them. On July 13 President Vargas signed a decree closing the headquarters of the *Aliança Nacional Libertadora*, an ultra-radical group. This action was upheld by the Supreme Court August 22. There were frequent arrests of Communists and other radicals on charges of spreading subversive propaganda and radical demonstrations were repeatedly repressed by troops. Violent clashes between Communists and Integralists continued. In June, shortly after Communist-Fascist disorders in Petropolis, an Integralist parade in São Paulo was called off to avoid further bloodshed. According to reports, the government showed itself increasingly sympathetic to the Fascists as the year progressed. Rising discontent in the army led the President to approve pay increases on May 15; at the same time he vetoed a bill granting higher salaries to other governmental employees. Political turmoil in the State of Pará in April forced President Vargas to appoint a new Federal interventor, under whom new elections were held. On April 28 the Constituent Assembly, which drafted the new

Constitution and thereafter served as the legislative arm of the government, was dissolved to make way for the regularly elected Congress.

Discontent among army non-commissioned officers and privates, affiliated with the disbanded *Allianca Nacional Libertadora*, led to a serious revolutionary outbreak on November 24. Revolted troops seized Natal and Recife, capitals of the States of Rio Grande do Norte and Pernambuco. While loyal troops were crushing these insurrections, two sympathetic outbreaks occurred among the troops stationed at Rio de Janeiro. The Vargas Government proclaimed martial law throughout the country for 60 days on November 25, and on November 28 it announced the complete suppression of the revolt. The uprising was crushed only after severe fighting in which 138 were killed, hundreds wounded, and 1300 soldiers placed under arrest. The rebels sacked Natal before being driven out by the loyalists, and were said to have carried off large sums from some of the banks.

The uprising was planned by the outlawed *Allianca Nacional Libertadora*. While the government accused this organization of planning a Communist régime, the *Allianca* in a manifesto circulated immediately after the revolt denied this charge. It asserted that the movement aimed at the confiscation of foreign capitalistic enterprises in Brazil, distribution of the large landed estates among small farmers and workers, and a relatively mild programme of labor and social legislation.

A clamor for more drastic suppression of radical and Communist activities swept Brazil following the revolt, with the Vargas Government sponsoring the movement. A score of foreign radicals said to be implicated in the revolt were deported. On December 12 Congress passed the National Security Act providing for the dismissal and imprisonment of public employees and members of the military services participating in revolts. Martial law was suspended for 48 hours on December 16 to enable Congress to pass further emergency legislation in the form of constitutional amendments. On December 17-18 Congress rushed through by a vote of 210 to 59 a measure giving the President extraordinary powers to declare a state of war in case of revolt, thus putting all rebels under the jurisdiction of military courts. At the request of President Vargas, Congress on December 21 approved the declaration of a state of war throughout the entire republic for 90 days to enable the government to root out political opponents. As the year closed Congress was considering legislation for the expulsion of all alien agitators against the existing régime, whether Communist or Fascist, and the training of teachers to combat communism by cultural means. The trial of several hundred of the November rebels under the newly enacted National Security Act was scheduled for early in 1936.

Economic Issues. The regulation of foreign exchange transactions remained the major problem confronting Brazil in the economic sphere. The exchange control system established in September, 1931, was modified in the direction of a freer exchange market by a number of decrees issued in 1934. A further step in the same direction was taken on Feb. 11, 1935, when the Bank of Brazil announced that all export bills must be sold at the "free market" rate of exchange, but that purchasing banks were obliged to transfer to the Bank of Brazil 35 per cent of their exchange in sight drafts on London or New York. For goods cleared through the customs after February 11, exchange

cover had to be bought in the "free" exchange market. On June 19, 1935, however, all purchases in the "free" market were made subject to the approval of the Bank of Brazil. Subsequent changes in exchange regulations during August and September introduced considerable confusion and uncertainty which handicapped the development of foreign trade.

The continued shortage of foreign exchange made it likely that Brazil would again be forced to suspend the partial payments which it was making on its foreign debts. In an effort to avoid this the government sent a financial mission to the United States and Great Britain to adjust the complex financial and commercial issues involved. On February 2 the mission signed a reciprocal trade agreement with the United States, ratified by the Brazilian Congress November 15. The United States agreed to retain coffee and cacao, the chief Brazilian exports, and 10 other commodities on its free list and to grant tariff concessions on Brazil nuts, castor beans, manganese ore, and a few other items. In return Brazil granted concessions on imports of fruits, radios, films, automobiles and parts, electric refrigerators, and many other items from the United States. It agreed not to increase or impose rates on 13 additional items and not to discriminate against the United States in the allotment of foreign exchange. Brazil promised to provide sufficient exchange to pay for future imports from America, liquidate the existing American deferred commercial indebtedness, and service Brazilian bonds held in the United States. The effect of the U. S. Supreme Court's gold clause decision early in 1935 was to reduce Brazilian indebtedness to American security holders by \$145,424,000 and to reduce the annual service on the American debt by \$15,350,000. On account of the depreciation of the milreis, however, Brazil was unable to obtain the full benefit of the Supreme Court decision.

On March 27, the Brazilian financial mission signed an agreement in London for the settlement of commercial debts owed to British exporters. Brazil agreed to issue 4 per cent sterling bonds to the British creditors and to service these bonds from a special fund of £1,200,000 to be set aside annually from the percentage of foreign exchange reserved for government requirements. Cash payment of all the smaller accounts was to be made within 30 days. A French commercial mission, which visited Brazil during August, secured an agreement for the partial thawing out of French credits blocked in Brazil, which were reported to total about 50,000,000 francs.

Foreign Relations. The main developments in Brazil's foreign relations during 1935 were the strengthening of her political and commercial ties with Argentina and Uruguay through the official visit which President Vargas made to Buenos Aires and Montevideo in May and June; Brazil's active coöperation with Argentina in the negotiation of the truce of June 12, 1935, between Bolivia and Paraguay; and the action of the Brazilian Senate in killing a proposal for recognition of the Soviet Union. In Buenos Aires President Vargas signed a series of agreements with Argentina. During the Chaco peace negotiations at Buenos Aires, the Argentine and Brazilian Foreign Ministers were reported to have pledged the honor of their respective countries that they would not permit the peace conference to adjourn without reaching a definitive agreement for direct settlement or arbitration of the territorial dispute. Brazil was the first of the Pan American countries to form a

local committee of the Inter-American Commercial Arbitration Commission, organized in September, 1934, in accordance with a resolution adopted at the Montevideo Conference in December, 1933. See ARGENTINA and BOLIVIA under *History*; PAN AMERICAN UNION.

Although Congress on October 8 adopted a resolution condemning Italy's attack on Ethiopia, the Vargas Government early in November bluntly refused to collaborate with the League of Nations in the application of economic sanctions against Italy. As a result Brazil profited by the foodstuffs and raw materials sold to Italy at high prices. A considerable number of Italian colonists in Brazil went home for military service in Ethiopia and the large Italian colony remaining undertook to boycott goods of Great Britain and the other sanction-applying powers.

Consult Horace B. Davis, "Brazil's Political and Economic Problems," *Foreign Policy Reports*, Mar. 13, 1935.

BREASTED, JAMES HENRY. An American archaeologist and historian, died in New York City, Dec. 2, 1935. Born in Rockford, Ill., Aug. 27, 1865, he was educated at North Central College (1888); the Chicago Theological Seminary (1888-90); Yale University (1892); and the University of Berlin (1894). Upon his return from Germany in 1895, he joined the staff of the University of Chicago as an instructor in Egyptology, subsequently becoming, in addition, an instructor in Semitic languages, and in 1905, full professor of Egyptian and Oriental history. By 1905 he had translated all of the historical documents of ancient Egypt down to the Persian period (*Ancient Records of Egypt*), an achievement which formed the basis for his *History of Egypt*, a work which is still the standard in its field. In 1915, he was appointed chairman of the Department of Oriental languages and literatures. The year after his association with the University began, he was appointed assistant director of the Haskell Oriental Museum. Meanwhile, he collaborated on the Imperial Egyptian Dictionary at Berlin, and in 1900 was commissioned by the Royal Academies of Germany to tour the museums of Europe in order to copy the Egyptian inscriptions in those museums for the dictionary. Upon his return in 1901, he became director of the Haskell Museum.

From 1905 to 1907, Dr. Breasted led two expeditions to Egypt, where he began the classification and copying of the inscriptions on the then existing monuments, a work he was obliged to discontinue for lack of funds. Returning to America in 1908, he devoted himself to a special study of the ancient Egyptian religion and published his findings in *The Development of Religion and Thought in Ancient Egypt* (1912). Impressed by the inadequate teaching of ancient history in American schools, he compiled an ancient history, entitled *Ancient Times* (1916; rev., 1935).

Through the aid of John D. Rockefeller, Jr., a research laboratory—the Oriental Institute of the University of Chicago—was established in 1919 and Dr. Breasted was made its head. Research projects were launched in Chicago and in the Near East. Among the projects carried on at Chicago is a comprehensive dictionary of the cuneiform documents of Western Asia. In Cairo and the museums of Europe, another staff, Coffin Texts Project, was engaged in copying Egyptian coffin text documents, forerunners of the Egyptian Book of the Dead. Another staff, Epigraphic and Architectural Survey Expedition, resumed the task of saving

the temple inscriptions of ancient Egypt. The prehistoric Survey Expedition was organized in 1926 to collect and study all the surviving traces of prehistoric man in Egypt.

As a result of a preliminary expedition through western Asia in 1920, Dr. Breasted developed a plan for a five-year campaign of systematic excavation at Armageddon (Megiddo) in Palestine (Megiddo Expedition). In 1926 he also dispatched an exploring expedition into the ancient Hittite region of northwest Asia Minor, which subsequently discovered a whole series of long-forgotten towns and cities of the Hittites. This Hittite or Anatolian Expedition began to receive support in 1927 from the General Education Board for a five years' campaign, and until 1933, was excavating the mound of Alishar. In 1928 an expedition was dispatched to Iraq, to excavate the palace of Sargon II at Khorsabad. The work of this expedition was subsequently extended also to ancient Babylonia. In 1930 Dr. Breasted inaugurated an expedition in north Syria between Aleppo and Alexandretta at a mound called Chatal Huyuk, and later the project was extended to include the mound of Tell Jedeideh. In this same year he launched an expedition to excavate Persepolis, which, since 1931, has been at work. The reports of the various expeditions and researches, as well as translations of original documents, are published regularly in four main different series of volumes issued by the Institute.

In 1925, the University relieved him of all his teaching duties that he might devote himself to the work of the Institute, and in 1933 he retired in order to devote his time solely to that organization. His last visit to the Near East was made in the fall of 1935, where he had gone after attending the International Congress of Orientalists in Naples.

Dr. Breasted's work, which was of the utmost value to the Institute and to Oriental scholarship, consisted principally in the investigation of the origins and early history of civilization, beginning with Egypt and extended to include the history of Western Asia. It was his belief, which he set forth in several of his volumes, that social and moral development was first seen in Egypt, and that the key to the origin of modern ethics and philosophy might very well be found in the sands along the Nile.

In addition to his long years of teaching at the University, and his work in the East, he found time to deliver the Morse lectures at the Union Theological Seminary (1912); Earl lectures at the Pacific School of Religion of the University of California (1918; 1930); Hale Foundation lectures at the National Academy of Sciences, Washington (1919); Haskell lectures, Oberlin College (1922); first Messenger lectures, Cornell University (1925), and first Mary Flexner lectures, Bryn Mawr College (1929).

His valuable work brought to him many honors, including the Gold Medal of the Geographic Society of Chicago (1929); the Rosenberger Gold Medal for his contributions to the history of civilization (1929); the Gold Medal of the Holland Society of New York (1930); and the Gold Medal for distinguished achievement in the Fine Arts awarded by the American Institute of Architects (1934). He held membership in all the important academies and societies throughout the world, and was president of the American Oriental Society (1918); the History of Science Society (1926); the American Historical Association (1928), and

served as a trustee of the American School of Oriental Research (1930-33).

Besides acting as associate editor of the *American Journal of Semitic Languages* and of *Biblical World*, and contributing to various foreign scientific journals, his works include: *A New Chapter in the Life of Thutmose III* (1900); *A History of Egypt* (1905; 2d ed., 1909); *Ancient Records of Egypt* (5 vols., 1905); *The Temples of Lower Nubia* (1906); *A History of the Ancient Egyptians* (1908); *The Monuments of Sudanese Nubia* (1908); *Outlines of European History*, with J. H. Robinson (1914); *A Short Ancient History* (1914-15); *Survey of the Ancient World* (1919); *History of Europe, Ancient and Medieval*, with J. H. Robinson (1920); *Ancient History Atlas* (1920); *General History of Europe*, with Robinson and Smith (1921); *The Oriental Institute of Chicago, A Beginning and a Program* (1922); *Oriental Forerunners of Byzantine Painting* (1924); *Victorious Man* (1926); *Conquest of Civilization* (1926); *The Oriental Institute* (vol. xii of U. of Chicago Survey, 1933); *The Dawn of Conscience* (1933). Also, he translated an extraordinary Egyptian surgical treatise written on papyrus in the 17th century B.C., which was brought out of Egypt by Edwin Smith. It was published under the title, *Edwin Smith Surgical Papyrus* in two volumes, one in 1928; the other in 1930.

BRETHREN, CHURCH OF THE. A church established in 1719 at Germantown, Pa. It originated at Schwarzenau, Germany, in 1708, and is the largest of the five branches of the denomination formerly known as the German Baptist Brethren or Dunkers. Other churches of the group are: The Church of God (New Dunkards); Brethren Church (Progressive Dunkers); German Seventh Day Baptists; and Old Order German Baptist Brethren.

There were on Sept. 30, 1935, in the 49 district conferences of the United States and Canada, 1563 churchhouses, of which 218 were in cities, and 1345 in small towns and rural districts. These churchhouses represented 1034 congregations. The total membership was 159,128. Foreign mission work was carried on in India, China, and Africa. The church membership in India was 5213; in China 1708; and in Africa 100. Africa, the newest mission, was launching out very strong in evangelism, education, and general medical service, with a large leper colony.

The denomination supports the following colleges: Bridgewater, in Bridgewater, Va.; Blue Ridge, in New Windsor, Md.; Elizabethtown, in Elizabethtown, Pa.; Juniata, in Huntingdon, Pa.; Manchester, in North Manchester, Ind.; McPherson, in McPherson, Kans.; and La Verne, in La Verne, Calif. Bethany Biblical Seminary is located in Chicago. The *Gospel Messenger* is the official church paper.

The officers presiding at the 1935 general conference were: Dr. C. C. Ellis, moderator; the Rev. Rufus D. Bowman, reader; the Rev. J. E. Miller, secretary. The moderator-elect for 1936 was Dr. D. W. Kurtz. This conference, which was held at North Manchester, Ind., took strong grounds against the liquor traffic and a stand in favor of peace and a warless world. The Committee on Fraternal Relations reported progress.

Headquarters of the four general boards of the church—mission, Christian education, ministerial, and general education—and of the Brethren Publishing House are in Elgin, Ill.

BRIDGEMAN, WILLIAM CLIVE BRIDGEMAN, FIRST VISCOUNT, OF LEIGH. A British statesman, died at Minsterley, England, Aug. 14, 1935. Born in London, Dec. 31, 1864, he was educated at Eton and at Trinity College, Cambridge, where he won classical honors in 1887. In 1889 he began a governmental career as an assistant private secretary to Lord Knutsford, the Colonial Secretary. In 1895 he became assistant private secretary to Sir Michael Hicks-Beach, and two years later a member of the London School Board for Hackney. After making several unsuccessful attempts to enter parliament he was finally elected as a Unionist member of Parliament by Oswestry in 1906. Five years later he became a junior Opposition whip.

In the first coalition ministry formed during the World War, Viscount Bridgeman was a Lord Commissioner of the Treasury (1915-16) and later served as Assistant Director of the War Trade Department. He became Parliamentary Secretary to the Ministry of Labor in 1916, and was private secretary to the Board of Trade from 1919 to 1920, becoming in the latter year, Secretary of Mines, a position he held until 1922, when Bonar Law appointed him Home Secretary. During his occupancy of this office, he had charge of the internment and deportation of Irish prisoners in England, and his actions in the discharge of this duty were declared illegal by the Court of Appeals. For his protection, an Indemnity bill was passed.

When the second Ministry of Stanley Baldwin was formed in 1924, Bridgeman was created First Lord of the Admiralty, and served until 1929. During his tenure of office he pushed the Singapore naval base project against Liberal and Labor opposition, and led the British delegation to the unsuccessful Geneva naval parley of 1927. He fought against any reduction of British naval strength and defeated Winston Churchill, Chancellor of the Exchequer, in his attempt to cut down the cruiser programme in the interests of economy. In 1925, he acted as government mediator in the mine labor dispute, but his efforts were unsuccessful, and in the following year a general strike occurred. He was one of the ministers who objected to the efforts of the Prime Minister to avert the strike and threatened to resign if they were carried out.

He was made a Privy Councillor in 1920 and three years later an Ecclesiastical Commissioner. Created a viscount in 1929 Bridgeman resigned from the House of Commons, after having served there for 23 years. In 1933 he became a governor of the British Broadcasting Company, and subsequently its chairman, a post he held until his death.

BRIDGES. The unprecedented bridges under construction at San Francisco still demand the first attention of the bridge engineer. These have been described in previous YEAR BOOKS.

Bay Bridge. Progress in this unique combination of twin suspension spans west of Yerba Buena Island and of a huge cantilever span with a long approach on the east, has been rapid during the year. Cable spinning on the suspension spans is under way and, together with the unique and difficult foundation construction for this portion of the undertaking, has resulted in this work receiving more attention than the great east cantilever span. As a matter of fact, the main span of the San Francisco-Oakland cantilever will be second to none of its type in the United States and ex-

ceeded only by the famous Quebec, Canada, and the older Firth of Forth, Scotland, bridges. Its 1400 ft. makes it 200 ft. longer than the Longview highway bridge over the Columbia River and, in addition, the provision for six lanes of vehicles on the upper and three lanes plus two rapid transit tracks on the lower decks, makes it an extremely heavy bridge—actually greater in transportation capacity than the two larger spans noted.

The plan being followed is to carry through the erection by the cantilever method throughout—the suspended span will not be hoisted into place as was done at Quebec and at the nearby Carquinez Straits bridge. The bridge is also interesting in that 16 per cent of the steel tonnage used is nickel steel, 40 per cent silicon steel, 34 per cent carbon steel, and 10 per cent specially heat-treated eyebars. While the details are not quite as huge as those on the Quebec cantilever, the sections of members are, by comparison with usual bridge work, of extraordinary size and steel pins as large as 24 in. in diameter are used at the connections.

Buzzard's Bay Lift Bridge. Plans to widen the Cape Cod Canal to 500 ft have required the construction of several new bridges (see 1934 YEAR BOOK). The 544 ft span railroad lift, which replaces the old 160 ft bascule bridge, is said to set a record span for lift bridges. The span is suspended by 80-2½ in diam wire ropes passing over four 15 ft diam sheaves, each of which sheaves carries a million pound load and rotates on roller bearings.

Concrete Trusses. Various forms of trusses, built of reinforced concrete, have been used in Europe but the type has found little favor with American engineers. The recent completion of a 170 ft through-truss highway span at Tacoma, Wash., sets a record for this type in the United States. A unique feature is the provision for sidewalks on each side of the bridge by means of openings left in the lower portions of the truss members. These members are extremely wide, 7 ft., and 3 ft wide openings for foot passengers have been provided.

Continuous Truss Bridge at Omaha. This new highway crossing over the Missouri River at Omaha, Neb., recently completed, is interesting both because it is a notable continuous truss span (two trusses of 525 ft. span each), and because its main span was built over, not an existing, but a future river channel. The War Department proposed radical changes in channel location at this point and the bridge was planned to meet the final channel plans.

Davenport, Iowa, Bridge. Serving the Tri-Cities group of Moline and Rock Island, Ill., and Davenport, Ia., this 740 ft. main span suspension bridge with continuous truss approaches, was opened in November. Spanning the pool formed by the Rock Island navigation dam three miles below, the bridge is of particular interest because of unique construction methods. Instead of the usual traveling crane, a floating-tower derrick was used in erecting the structural steelwork of the bridge.

Golden Gate. By November, the delay, due to foundation difficulties, in the construction of the south tower of this record 4200 ft suspension span had been met, the tower rapidly erected, cable spinning equipment installed, and cable spinning was under way. The two cables will be 36 inches in diameter, and a new arrangement of spinning wheels and haulage ropes will be followed. Instead of carrying each wheel the entire length of

the bridge, anchorage to anchorage, the travel will be only half this length, the bridge wires being transferred to the returning wheels at the centre of the span. The schedule calls for completion of the spinning operation by August, 1936.

New Orleans Bridge, THE. Located about 3½ miles above New Orleans, this combination railroad, vehicular, and pedestrian bridge is one of the longest bridges in the world—almost 4½ miles. It was opened for traffic early in December. It is the 29th bridge to span the Mississippi, and is, of course, the southernmost span over the river. A cantilever span of 790 ft. with anchor arms of 528 ft. is combined with a through-truss span of 531 ft., and four deck-truss spans of 267 to 330 ft. for the main channel crossing. Long viaduct approaches were necessary to secure, with reasonable grades, the required channel clearance of 135 ft. Extensive use was made, in the construction of this bridge, of silicon steel and of heat-treated eyebars, and it thus typifies modern practice in the field of bridge construction.

Oregon Coast Highway Bridges. An interesting programme, involving five important bridges to replace older ferries, is under way on this coast highway. A few years ago all of these bridges would have been considered remarkable structures, but to-day, although these works have many interesting features, they create no new records and pass almost unnoticed. The Yaquina River crossing involves a 600 ft steel arch, that at Alsea Bay two 154 ft and one 210 ft tied arches of concrete. Siuslaw River crossing also uses two 154 ft. tied concrete arches together with the double leaf bascule span. At the Umpqua River bridge a 430 ft. swing span is used and at Coos Bay, a cantilever bridge 793 ft centre to centre of towers which provides 120 ft. clearance for a width of 527 ft. These bridges were financed by PWA funds on a toll redemption basis.

Raquette River, N. Y. The recently completed two 150 ft. truss spans of this bridge, which are of completely welded construction, set a new American record for this type of bridge construction which is only 11 ft under the world record. The bridge is a 20 ft. wide highway structure on the international toll highway about 9 miles east of Massena, N. Y. The trusses are of the through Pratt type.

Rio Grande. It is seldom that bridges are completely submerged by floods but the concrete arch Laredo Bridge over the Rio Grande has been twice subjected to complete submergence. In order to prevent the railing from holding jams of driftwood, the older concrete railing on this bridge has been replaced with a light movable railing made of aluminum.

Rip Van Winkle Bridge, N. Y. Spanning the Hudson near Catskill, N. Y., this State Bridge Authority toll bridge, was opened for traffic in July. The main span is an 800 ft. cantilever with 142 ft. clearance. A long trestle approach was required at the east end.

Triborough Bridge, N. Y. The redesign of this long combination of structures has permitted work to go rapidly forward. Cable spinning on the main span over the East River was completed and most of the floor system placed by the end of the year. The approach structures are also well advanced and tower work on the 125th St. lift span is under way.

Parkway approaches are an important element in modern highway bridge plans. The so-called Inter-

borough Parkway on Long Island, which is an important feature of this bridge development, was opened in November.

FOREIGN BRIDGES

La Roche-Guyon Bridge, France. This through type concrete arch bridge with the remarkable span of 528 ft. was completed over the Seine in France. The two hingeless arch ribs are heavily reinforced with tiers of spiral coils and the deck is hung from reinforced-concrete hangers. Although less in span than the famous arch at Brest, this bridge is said to be the longest span of its kind in the world. As is usual in recent French work, the arch ribs are hollow and were built in forms suspended by cables running from three falsework towers built on piles driven in the river bottom. With American labor conditions the complicated reinforcement used in this bridge would have been excessively costly to fabricate, and the American engineer would also question the wisdom of using the daring method in supporting the forms, a method requiring highly skilled workers.

Waterloo Bridge, London, England. Designed by the famous British engineer, John Rennie, and opened in 1817, this bridge over the Thames at Westminster consisted of nine semi-elliptical arches of 120 ft. clear span. Serious settlement of the fifth pier which developed in 1923 later became worse. A temporary bridge was opened in 1925 and now the old structure is being demolished to make way for a new and wider bridge.

BRIGHAM YOUNG UNIVERSITY. A co-educational institution in Provo, Utah, founded in 1875 and maintained under the auspices of the Church of Jesus Christ of Latter-day Saints. In the 1935 summer session 670 students were enrolled; the autumn session enrollment was 2088. The faculty numbered 119 members. The library contained 100,000 volumes. The budget for the year was \$324,000. A new life science building was completed in 1935 at a cost of \$100,000. President, Franklin Stewart Harris, Ph.D.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. An association founded in York, England, in 1831, and incorporated by Royal Charter in 1928, for the purpose of fostering the interests of workers in all branches of science and to give a stronger impulse to scientific research, both theoretical and practical.

The annual meeting was held in Norwich, England, Sept. 4-11, 1935, under the presidency of Prof. W. W. Watts, who opened the session with an address entitled "Form, Drift, and Rhythm of the Continents." His paper was in the nature of a review of the theories that have been advanced to account for geological resemblances between the continents of the eastern and western hemispheres and for other points of close similarity.

The addresses delivered by the sectional presidents were equally notable. These included "The Story of Isotopes," by F. W. Astor (mathematical and physical sciences); "The Molecular Structure of Carbohydrates," by Prof. W. N. Haworth (chemistry); "Some Geological Aspects of Recent Research on Coal," by Prof. H. G. A. Hickling (geology); "The Species Problem," by Prof. F. Balfour-Browne (zoology); "Some Aspects of the Polar Regions," by Prof. F. Debenham (geography); "Economic Nationalism and International Trade," by Prof. J. G. Smith (economic science and statistics); "The Stability of Structures," by J. S. Wilson (engineering); "Recent Progress in the Study of Early Man," by Sir Arthur Smith Woodward (anthropology); "The Pituitary Body and the Diencephalon," by Prof. P. T. Herring (physiology); "Personality and Age," by Dr. L. Wynn Jones (psychology); "Some Aspects of Plant Pathology," by F. T. Brooks (botany); "Education and Freedom," by A. W. Pickard-Cambridge (educational science); "The Financial and Economic Results of State Control in Agriculture," by J. A. Venn (agriculture).

The evening discourses were given by Dr. S. J. Davies on "Diesel Engines in Relation to Coastwise Shipping," and by Dr. C. S. Myers on "The Help of Psychology in the Choice of a Career."

The officers elected at the meeting were Sir Josiah C. Stamp, president; Prof. P. G. H. Boswell, general treasurer; F. T. Brooks and Allan Ferguson, general secretaries; and O. J. R. Howarth, secretary. Headquarters are at Burlington House, London.

BRITISH CAMEROONS. See CAMEROONS, BRITISH.

BRITISH COLUMBIA. The most westerly province of Canada. Area, 366,255 sq. miles, exclusive of salt-water area. Population (1934 estimate), 725,000 compared with 694,263 (1931 census). During 1934 there were 9744 births, 6372 deaths, and 4767 marriages. Chief towns: Victoria, the capital, 39,082 inhabitants in 1931; Vancouver, 246,593; New Westminster, 17,524; North Vancouver, 8510; Trail, 7573; Nanaimo, 6745.

Production. The preliminary estimated total value of field crops for 1935 was \$13,244,000 (\$12,749,000 in 1934) of which wheat (1,531,000 bu) represented \$1,271,000, oats (5,037,000 bu), \$2,116,000; potatoes (95,250 tons), \$1,810,000, turnips, etc. (60,450 tons), \$731,000; hay, clover, and fodder corn (531,000 tons), \$5,860,000; grain hay, \$990,000. In 1934 the province had 294,400 cattle, 173,100 sheep, 58,262 horses, and 46,300 swine. Fur production (1933-34): 160,438 pelts valued at \$961,108 of which mink (46,284 pelts) accounted for \$462,840; beaver (12,523 pelts), \$125,250.

Mineral production (1934) was valued at \$41,206,965 of which gold (296,196 fine oz.), \$10,218,762; lead (344,467,138 lb.), \$8,392,597; copper (48,246,924 lb.), \$3,579,583; silver (8,729,721 fine oz.), \$4,143,204; zinc (249,152,403 lb.), \$7,583,202; coal (1,485,969 short tons), \$5,351,108. Mineral production (1935) was estimated to value \$47,807,157 including gold, \$14,261,200, lead, \$10,206,000; zinc, \$7,862,400; silver, \$5,547,057; coal, \$4,887,500; copper, \$2,979,600. The fisheries catch for 1934 amounted to 3,666,000 cwt. valued at \$15,234,335 of which salmon accounted for \$12,351,000. In 1933, including Yukon Territory, there were 1697 factories, with 30,896 workers, from which the value of products was \$145,490,955 gross and \$75,195,257 net.

Government. For the year ended Mar. 31, 1935, total revenue was \$22,761,719; total expenditure, \$21,597,544; gross debt, \$172,463,172, sinking fund, \$32,717,498. The government included a lieutenant-governor aided by an executive council, and a legislative council of 48 members. The province was represented in the Dominion Parliament at Ottawa by 6 Senators and 16 members in the House of Commons. Lieut.-Gov. in 1935, J. W. F. Johnson; Premier, T. D. Pattullo (Liberal). See CANADA.

BRITISH EAST AFRICA. See KENYA, TANGANYIKA, and UGANDA.

BRITISH EMPIRE. An empire consisting of (1) GREAT BRITAIN and NORTHERN IRELAND, Channel Islands, Isle of Man, (2) IRISH FREE STATE, INDIA, and the various British Dominions, Colonies, Protectorates, and Dependencies. Including the mandated territories of CAMEROONS, NEW GUINEA, PALESTINE, NAURU, SOUTH-WEST AFRICA, TANGANYIKA, TOGOLAND, WESTERN SAMOA, the British Empire had a total area of 13,355,426 sq. miles and an estimated population of 495,764,000 (1933-34). Consult these articles.

BRITISH GUIANA, *gê-a'-na*. A British colony in South America. Area, 89,480 sq. miles; population (Jan. 1, 1935, estimate), 323,171 including 10,585 Europeans, 136,004 East Indians, and 127,301 Negroes. During 1934 there were 9301 births, 7980 deaths, and 1563 marriages. Capital, Georgetown, 64,207 inhabitants.

Production and Trade. The main products during 1934 were sugar (132,240 tons), rice (55,122 tons of paddy), coconuts, diamonds (44,820 carats), gold (27,691 oz.), bauxite (64,889 tons), timber, balata, and coffee. Livestock in the colony (1934): 149,662 cattle, 17,809 sheep, 14,110 swine, 8980 goats, 6127 asses, 2888 horses, 1612 mules, and 82 buffaloes. Matches, boots, and shoes, edible oil, and cigarettes were manufactured in the colony. In 1934, imports were valued at £1,750,006, exports (including reexports), £1,894,131 of which sugar accounted for £1,160,094.

Government. For 1934, revenue (from all sources) amounted to £1,272,002; expenditure, £1,205,427; public debt (Jan. 1, 1935), £4,510,715 against which the sinking fund on Jan. 1, 1934, amounted to £671,666 (mean market value). Government was vested in a governor aided by an executive council, and a legislative council. Governor in 1935, G. A. S. Northcote.

BRITISH HONDURAS, *hôn-dôo'-ras*. A British crown colony in Central America. Area, 8598 sq. miles; population (Jan. 1, 1935 estimate), 54,744. Belize, the capital, had 16,687 people in 1931. During 1934 there were 1945 births, 971 deaths, and 450 marriages.

Production and Trade. The main products were mahogany and logwood, chicle, bananas, coconuts, citrus fruits, plantains, sugar, and rice. During 1934, imports were valued at \$1,912,375, exports, \$1,520,917. The exports of mahogany in 1934 totaled 4,679,085 cu. ft.; chicle, 787,526 lb.; bananas, 293,293 bunches (of which 287,000 bunches went to the U.S.A.). The total tonnage of shipping entered and cleared during 1934 was 491,249.

Government. The financial year was changed to the calendar year. For the nine months, April 1 to Dec. 31, 1934, revenue (including Colonial Development Fund grants) was \$627,591 including \$99,600 received as a loan grant-in-aid of administration from Great Britain; expenditure, for the same period, was \$816,811. The funded public debt on Jan. 1, 1935, was \$2,982,042 (exclusive of \$155,376 outstanding on account of loan works) against which the accumulated sinking funds amounted to \$355,035. Government is vested in a governor assisted by an executive council of 6 members and a legislative council of 13 members. Governor and Commander-in-Chief in 1935, Sir A.C.M. Burns.

BRITISH MALAYA. The Malay peninsula under British control comprising the Federated Malay States, Straits Settlements, and Unfederated Malay States (see the separate articles on these divisions). Total area, 51,001 sq. miles; total population (Dec. 31, 1934, estimate), 4,413,830 in-

cluding 2,075,000 Malaysians, 1,649,000 Chinese, 596,780 East Indians, 19,350 Europeans, and 16,920 Eurasians.

Production and Trade. Trade statistics cover only the above mentioned divisions. Rubber (479,371 tons), tin, (37,786 tons), pineapples, copra, palm oil, sugar, rice (29,310,875 bu.), areca nuts, timber, gold (29,453 oz.), and resin were, in 1934, the principal products. During 1934, total imports were valued at \$471,435,000; exports, \$568,487,000. Total rubber shipments during 1934 amounted to 681,897 tons valued at \$281,207,000; tin, 50,186 tons, \$96,724,000. Of the imports Netherland India sent \$159,808,000; Great Britain, \$67,335,000; British Possessions, \$72,248,000; Japan, \$38,000,000; U.S.A., \$88,256,566. The U.S.A. received \$188,555,000 of the exports; Great Britain, \$107,294,000; British Possessions, \$67,216,000; Japan, \$51,381,000; Netherland India, \$36,452,000 (\$ averaged \$0.5901 for 1934).

Communications. During 1935 telephone service with Siam was put into operation. A new air service of Imperial airways between British Malaya and Hong Kong was to be inaugurated on Oct. 1, 1935.

BRITISH NORTH BORNEO. A British protectorate occupying the northern area of the island of Borneo. Area, 31,106 sq. miles; population (1931 census), 270,223 of whom 340 were Europeans. The chief towns were Sandakan, the capital, which had 13,826 inhabitants, and Jesselton.

Production and Trade. Rubber, timber, sago, rice, coconuts, gums, coffee, and tobacco were the main products. In 1934, total imports were valued at \$4,790,050; total exports, \$10,052,094 of which rubber represented \$4,866,523; timber, \$2,256,681; leaf tobacco, \$159,552 (Straits \$ averaged \$0.5901 for 1934). The state railways carried 110,635 passengers during 1934 as compared with 76,066 during 1933.

Government. For 1934, revenue (exclusive of land sales) totaled \$2,662,908; expenditure, \$1,640,254. The territory was under the jurisdiction of the British North Borneo (Chartered) Company and was administered by a court of directors in London, and a governor (approved by the British Secretary of State). Governor in 1935, D. J. Jardine.

BRITISH SOLOMON ISLANDS PROTECTORATE. See SOLOMON ISLANDS, BRITISH.

BRITISH SOMALILAND. See SOMALILAND, BRITISH.

BRITISH SOUTH AFRICA. See SOUTH AFRICA, UNION OF.

BRITISH WEST AFRICA. The British sphere in West Africa. See CAMEROONS, BRITISH; GAMBIA; GOLD COAST; NIGERIA; SIERRA LEONE.

BRITISH WEST INDIES. The British possessions in the West Indies comprising (1) BAHAMAS, (2) BARBADOS, (3) JAMAICA with Turks Islands, (4) LEEWARD ISLANDS, (5) TRINIDAD with Tobago, (6) WINDWARD ISLANDS. See the separate articles.

BROOKINGS INSTITUTION. An organization devoted to public service through research and training in the social sciences. Established in Washington, D. C., in 1927, it maintains as operating units the Institute of Economics, the Institute for Government Research, and a division of training in which only those who have had at least two years of graduate work are accepted as research fellows.

In carrying out its purpose to aid constructively in the development of sound national policies with-

out regard to the special interests of any group, whether political, social, or economic, the institution conducted during 1935 several significant investigations. The resulting studies were published under the following titles: *The Formation of Capital*; *The National Recovery Administration: An Analysis and an Appraisal*; *Wheat and the AAA*; *Tobacco under the AAA*; *Marketing Agreements under the AAA*; *The Dairy Industry and the AAA*; *Livestock under the AAA*; *Cotton and the AAA*; *Labor Relations Boards*; *Income and Economic Progress*; *Cartel Problems*; *International Organizations in which the U. S. Participates*; *Public Welfare Organization*; *Hours and Wages Provisions in NRA Codes*; *The Warren-Pearson Price Theory*; *The Thirty Hour Week*.

The institution is supported from endowment funds and annual grants. The officers of the board of trustees for 1935-36 were: chairman, Frederic A. Delano; vice chairman, Leo S. Rowe; treasurer, Henry P. Seidemann; and president, Harold G. Moulton. Headquarters are at 722 Jackson Place, Washington, D. C.

BROOKLYN COLLEGE. A coeducational institution of higher education in Brooklyn, N. Y., founded in 1930 as one of the three institutions of higher learning supported by municipal taxes and administered by the Board of Higher Education. The others are Hunter College and the City College. The enrollment for the autumn of 1935 was 10,687 of whom 5228 were in the Day Session, 4704 in the Evening Session, 231 in the Maxwell Division, 358 in Courses for Teachers, and 168 in the Graduate Division. The 1935 summer session had an attendance of 2687. The faculty numbered 419, including 14 additions. The budgetary allowance for 1935 was \$1,612,127. There were 35,308 volumes and 296 periodicals in the library. Brooklyn College received a Federal grant for the erection of buildings. Ground was broken Oct. 2, 1935, and the contracts provide that the five buildings be completed by December, 1936. President, William A. Boylan.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES. An institution in Brooklyn, N. Y., composed of four divisions—education, museum of arts and sciences, children's museum, and a botanic garden. It was founded in 1824 and incorporated in its present form in 1890. Membership, about 9000, is open to all who are interested in any branch of science or art. The education division is divided into the following departments, composed of members interested in a particular field: Agriculture, astronomy, botany, dramatic art, engineering, ethnology, fine arts and architecture, geography, geology, music, pedagogy, philology, philosophy, photography, physics, political science, psychology, and zoology. These departments conduct courses and sponsor addresses, lectures, and concerts. The enrollment in the school of pedagogy in 1935 was 2805 with an attendance at lectures of 284,726.

The institute's museums contain collections in the fields of art, ethnology, and natural science; its botanic garden comprises more than 50 acres. Attendance at the museums during the year was 1,501,329 and at the botanic garden, 1,626,029. The library contains more than 27,000 volumes. In 1935 the permanent funds of the institute amounted to \$3,878,032.60; the funds to meet current expenses totaled \$734,376.80. The president of the board of trustees is Edward C. Blum; director of the division of education, Charles D. Atkins; of the muse-

um of arts and sciences, Philip N. Youtz; of the children's museum, Anna B. Gallup; and of the botanic garden, C. Stuart Gager. Headquarters are at Brooklyn Academy of Music, 30 Lafayette Avenue, Brooklyn, N. Y.

BROWN UNIVERSITY. An institution of higher education in Providence, R. I., founded in 1764, it has three major subdivisions: The College, for undergraduate men, Pembroke College for undergraduate women; and the Graduate School. The College includes a division of engineering. The enrollment in the autumn of 1935 was 1240 undergraduate men, 492 undergraduate women, and 285 graduate students. The faculty consisted of 227 members. The productive fund of the university on June 30, 1935, was \$10,304,992. The income for year ending June 30, 1935, was \$1,509,923. Gifts and bequests during the academic year amounted to \$257,627. The libraries contained approximately 500,000 volumes. President, Clarence Augustus Barbour, D. D., LL.D.

BRUNEI, brōō-nī'. A British protectorate in Borneo. Area, 2500 sq miles; population (Jan. 1, 1934), 32,900 compared with 30,135 (1931 census). Brunei, the capital, had 10,453 inhabitants. Cutch, rubber, jelutong, sago, and crude oil were the principal products. In 1934, imports were valued at £220,226; exports, £395,653; revenue, £75,252; expenditure, £63,584; public debt, £44,123. Brunei was ruled by a sultan but general administration was in the hands of the British Resident (in 1935, R. E. Turnbull).

BRUNSWICK. See GERMANY under *Area and Population*.

BRYN MAWR COLLEGE. An institution for the higher education of women in Bryn Mawr, Pa., founded in 1885. The enrollment for the autumn of 1935 totaled 508. The teaching staff numbered 85. The productive funds of the college amounted to \$6,087,757 and the receipts for the year 1934-35 were \$902,187. The number of volumes in the library was \$150,000. President, Marion Edwards Park, Ph.D., LL.D.

BUCKLE, GEORGE EARLE English journalist and author, died at Chelsea, Mar. 13, 1935. Born at Twerton-on-Avon, near Bath, England, June 10, 1854, he received his education at Winchester College and New College, Oxford, where he won the Newdigate Prize in 1875, and honors in literature in 1876 and in modern history in 1877. From the latter date until his marriage in 1885, he was a fellow of All Souls' College, Oxford. Admitted to the bar of Lincoln's Inn in 1880, he never practiced but entered journalism in the same year and became assistant editor of *The Times* of London. On the death of Thomas Chenerly in 1884, Buckle succeeded to the editorship, and held the post until his retirement in 1912.

The paper covered such important events as the fight for Home Rule, the fate of the Ministries, and Queen Victoria's first jubilee in 1887. It was during his editorship that *The Times* published, on Apr. 18, 1887, the alleged Parnell letter which was later declared by the Parnell Commission to be a forgery. Richard Pigott confessed to having made the forgery. Parnell brought an action against *The Times* for libel and claimed £100,000 damages but the case was settled out of court for £5000. Because of this incident, Buckle offered his resignation but it was declined. In the reign of King Edward, there was the Entente with Russia and France, and the project for a British Commonwealth of Free States, both of which were supported by *The Times*. It also gave modified support to Mr. Chamberlain's

campaign for tariff reform. During the period of his retirement, he was left to finish the *Life of Disraeli*, an original undertaking of W. F. Monypenny, a former associate on *The Times*. At the end of eight years (1920) Buckle completed the work which was hailed as one of the most authentic biographies in the language. Then followed the editing of the later correspondence of Queen Victoria, and on the completion of that work, Buckle was complimented by King Edward for a masterpiece of historical value. At the time of his death, he was engaged in writing an authoritative history of *The Times*.

BUCKNELL UNIVERSITY. A coeducational Baptist institution of higher learning in Lewisburg, Pa., founded in 1846 under the name of the University of Lewisburg but renamed in 1886 in honor of its benefactor, William Bucknell. In the autumn of 1935 the enrollment was 1085, of whom 689 were men and 396 women. At the junior branch in Wilkes-Barre, Pa., there were 193 students. There were 427 students enrolled in the summer session of 1935. The faculty numbered 78. The productive funds amounted to \$1,303,863 and the income for the year was \$610,000. The library contained 70,000 volumes. A \$6,000,000 programme was launched in 1934 to increase endowment and provide new buildings. This is a 12-year programme to be completed for the centennial in 1946, the first building of which was erected in 1935. Acting President, Arnaud C. Marts.

BUCKWHEAT. As estimated by the Department of Agriculture the 1935 buckwheat production of the United States, 8,234,000 bu., was 9 per cent less than the 1934 crop of 9,042,000 bu. but quite close to the average of 8,277,000 bu., the average for the five years 1928-32. The area harvested in 1935 was 496,000 acres, an increase of about 3.8 per cent over the acreage in 1934. This increase in acreage was more than offset by a decrease in the average yield from 18.9 bu. per acre in 1934 to 16.6 bu. in 1935. The yield per acre in the principal producing States, New York and Pennsylvania, was substantially lower than in 1934. The 1935 farm price as preliminarily estimated was 53.5 cents per bu. as compared with 58.6 cents, the average price for the crop marketing season of 1934, and on this basis the total farm value of the crop in 1935 was \$4,404,000 compared with \$5,296,000 in 1934.

The 1935 buckwheat crop as reported was produced in 22 States, the estimated yields of the leading States being as follows: Pennsylvania 2,847,000 bu., New York 2,380,000 bu., Ohio 420,000 bu., Michigan 378,000 bu., and West Virginia 340,000 bu. These States produced about 75 per cent of the total yield. During the fiscal year ended June 30, 1935, the United States exported 55,000 bu. of buckwheat.

BUFFALO, THE UNIVERSITY OF. A coeducational institution of higher learning in Buffalo, N. Y., founded in 1846. The enrollment in the various schools for the autumn of 1935 was 1620; in addition there were 1588 students in the extension division. The faculty numbered 435. The enrollment for the 1935 summer session was 543. The new Lockwood Memorial Library containing the Lockwood collection of rare books (2500 volumes) was completed during 1935. It was the gift of Thomas B. Lockwood. The libraries of the university now contain 110,057 volumes and 90,000 pamphlets. Chancellor, Samuel P. Capen, Ph.D., L.H.D.

BUILDING. According to its annual survey of the building permits issued in 215 major cities throughout the United States, *Dun & Bradstreet,*

Inc., report a marked upturn in the building industry in 1935. In these cities the value of permits for new buildings, alterations, and repairs reached the total of \$596,686,708, greater by 71.3 per cent than the total in 1934 of \$348,390,747, and the greatest since 1931. In that year the total was \$1,158,963,273, and in 1927 the building permits in the same cities aggregated \$3,419,479,046. In other words, though building permits showed a definite trend toward recovery in 1935, their aggregate values were still but 17 per cent of the 1927 aggregate.

Though the building permits issued in every month of the year exceeded those for the corresponding months of 1934, the greatest activity occurred in the three closing months. The upward trend was general throughout the country, with only 39 of the 215 cities in the survey reporting decreases from the previous year. By geographic groups, the records compiled by *Dun & Bradstreet, Inc.*, for residential and non-residential building permit values for 1934 and 1935 are shown in the accompanying table.

**BUILDING PERMITS IN THE UNITED STATES
FOR 25 CITIES [From *Dun & Bradstreet, Inc.*]**

Groups	1935	1934	Change %
New England . . .	\$ 41,748,198	\$ 31,788,639	+ 31.3
Middle Atlantic . . .	197,031,051	123,986,089	+ 58.9
South Atlantic . . .	65,290,987	40,737,271	+ 60.3
East Central . . .	96,293,932	50,406,917	+ 91.0
South Central . . .	54,980,200	27,242,066	+ 101.8
West Central . . .	38,352,892	21,984,304	+ 74.5
Mountain . . .	12,190,531	5,692,070	+ 114.2
Pacific . . .	90,798,917	46,553,391	+ 95.0
Total United States	596,686,708	348,390,747	+ 71.3
New York City . . .	141,397,239	82,989,652	+ 70.4
Outside New York City	455,289,469	265,401,095	+ 71.6

From the records compiled from the entire country, *Engineering News-Record*, New York, in its annual review number reported that residential building showed a gain of 92 per cent over 1934, and was estimated at \$479,000,000; private engineering work, which includes multiple-family dwellings, gained 54 per cent, and was estimated at \$742,000,000. The estimated total of construction of all types was \$3,681,000,000, of which \$2,460,000,000 was public works. The total is a gain of 19 per cent over the 1934 volume, and 51 per cent above that of 1933, though it is still only 42 per cent of the 1926 normal. The report states further "New productive capital made available in 1935

**CONSTRUCTION BY CLASSES AND GEOGRAPHIC
SECTIONS (000,000 OMITTED)**

	1935	1934
Waterworks	\$ 80	\$ 92
Sewers	99	61
Bridges, public	86	88
Excavations	258	266
Streets and roads	325	345
Buildings, public	297	204
Unclassified, public	69	61
Total public	1,219	1,119
Federal Government (included above)	362	360
Bridges, private	11	10
Buildings, industrial	172	105
Buildings, commercial	108	80
Unclassified, private	78	45
Total private	371	241
Total engineering construction	1,590	1,360
New England	101	100
Middle Atlantic	441	273
South	245	214
Middle West	280	226
West of Mississippi	295	310
Far West	225	234

for construction purposes totaled \$1,782,000,000, exclusive of appropriations and allotments for Federal work. Of this amount the bulk was PWA grants and loans which amounted to \$1,208,000,000. Other State and municipal financing was \$497,000,000, about double that of the previous year."

A classification of construction contracts reported during the year to *Engineering News-Record* is shown in the last table on page 105.

BULGARIA. A Balkan monarchy. Capital, Sofia. King in 1935, Boris III, who succeeded to the throne Oct. 3, 1918.

Area and Population. With an area of 39,825 square miles, Bulgaria had a population at the census of Dec. 31, 1934, of 6,090,215 (5,478,741 at the 1926 census). In 1926 Bulgarians comprised 81.32 per cent of the total population. Births in 1933 numbered 174,095; deaths, 92,561; and marriages, 55,886. The census populations of the chief cities in 1934 were: Sofia, 287,976; Plovdiv (Philippolis), 100,485; Varna, 70,183; Ruse (Ruschuk), 49,388; Burgas, 36,099; Pléven (Plevna), 31,764; Sliven (Slivno), 30,683. The Orthodox faith is the state religion.

Education. According to the 1926 census, 26.53 per cent of the male population and 53.60 per cent of the female population were illiterate. In 1932-33 there were 5509 national and private elementary schools, with 703,066 pupils; 2050 national and private secondary schools, with 251,699 pupils; the State University at Sofia, with 7204 students, and various other special and vocational schools. In all there were 7921 schools, with a total attendance of 993,050.

Production. About 81 per cent of the population is engaged in agriculture and fishing; 9 per cent in industry, and less than 3 per cent in commerce. The area under cultivation is about 10,219,000 acres, while forests cover 7,426,340 acres. Yields of the chief crops in 1934, with 1933 figures in parentheses, were (in 1000 metric tons): Wheat, 1,131.6 (1,601.9); rye, 167 (276); barley, 185.5 (359.9); oats, 73 (155.6); corn, 819.5 (1043); potatoes, 113 (77); sugar beets, 201 (185.9); grapes, 304.9 (280.5); tobacco, 14.9 (17.5). The beet sugar production declined in 1934-35 to 2200 metric tons from 40,400 tons in 1933-34. The wine (must) yield in 1934-35 was 3,049,000 hectoliters. Other products are attar of roses, fruits, and silk cocoons. Coal production in 1934 was 76,000 metric tons (80,000 in 1933); lignite, 1,561,000 metric tons (1,494,000). Output of other minerals in 1933 was (in metric tons): Lead, 1200; bauxite, 2200; salt, 5680. Manufacturing is but little developed. In 1926 the 197,784 industrial establishments (mostly home industries) employed 368,022 persons.

Foreign Trade. Imports in 1934 were valued at 2,229,483,000 leva (2,202,256,000 in 1933) and exports totaled 2,534,630,000 leva (2,846,349,000 in 1933). Textiles, metals, machinery, and mineral oils were the most important imports in value, while the chief exports were, in order of importance, tobacco, eggs, corn, wheat, and attar of roses. Of the 1934 imports, Germany supplied 901,529,000 leva; Italy, 176,150,000; Belgium, 167,441,000; United Kingdom, 142,869,000. Germany purchased exports to the value of 1,082,971,000 leva; Italy, 232,772,000; Austria, 134,888,000; and Switzerland, 121,928,000 leva.

Finance. Closed accounts for the fiscal year ended Mar. 31, 1934, showed gross revenue receipts, excluding those of the state railways, ports and coal mines, totaling 5,159,500,000 leva and ex-

penditures of 5,496,600,000 leva, the deficit being 337,100,000 leva. Effective Jan. 1, 1935, the fiscal year was changed to coincide with the calendar year. For the short period Apr. 1 to Dec. 31, 1934, budget estimates anticipated a deficit of 324,000,000 leva on receipts of 3,673,500,000 leva. For the calendar year 1935 the budget estimates envisaged a deficit of 430,800,000 leva on total receipts of 5,264,300,000 leva.

The public debt on Mar. 31, 1934, totaled 21,840,400,000 leva (foreign, 14,675,700,000; domestic, 7,164,700,000). The lev (par value, \$0.0122) exchanged at an average of \$0.01 in 1933 and \$0.0129 in 1934.

Communications. The state-owned railways in 1933 had 1655 miles of standard-gauge and 262 miles of narrow-gauge line. Highways extended about 10,800 miles (state roads, 4650 miles). The Danube River is an important traffic artery, 10,270 vessels of 1,844,204 tons entering the Bulgarian river ports in 1933. The net tonnage entered at all ports in the overseas trade during 1934 totaled 2,061,000; tonnage cleared, 2,069,000.

Government. Under the Constitution of 1879 the King exercised executive power through a cabinet appointed by him but responsible to the National Assembly (*Sobranie*) of 274 members elected for four years. This Constitution was suspended by the dictatorship headed by Col. Kimon Georgiev, which seized power through a *coup d'état* on May 19, 1934. By the decree of June 14, 1934, all political parties were dissolved and the formation of new ones prohibited. Colonel Georgiev announced his intention of drafting a new constitution establishing a corporative state on the Italian model. Meanwhile administration was carried on by means of decree-laws. For developments in 1935, see *History*.

HISTORY

Boris Regains Control. Failure of the Georgiev dictatorship to deal effectively with the country's serious economic and financial problems, coupled with dissension among the army officers supporting the dictatorship, enabled King Boris to reestablish his supremacy early in 1935. The efforts of Premier Georgiev to deprive Boris of all his powers had reached such lengths by the end of 1934 that a strong reaction occurred against the dictator among army officers as well as among the people generally. Georgiev, backed by Col. Damyon Veltchev, the real organizer of the anti-parliamentary *coup d'état*, was said to have forbidden Cabinet members to consult with the King without the Premier's permission. The King's photographs and accounts of demonstrations in his honor were excluded from the newspapers. The government even demanded power to appoint and dismiss Cabinet members and army officers independently of the King.

Early in January Boris took a firm stand in behalf of his prerogatives, refusing to dismiss a number of army officers at the demand of War Minister Zlatev. In the ensuing crisis a strong group of army officers, including General Zlatev himself, swung over to the King's side. Colonel Georgiev was forced to submit the resignation of the entire cabinet on January 22. The Georgiev-Veltchev faction was eliminated from the new cabinet formed soon afterwards by General Zlatev. The new Premier announced, however, that, except for confirming the King's prerogatives, the new ministry would follow the policies inaugurated by the Georgiev Government.

Zlatev Cabinet Resigns. In pursuing the same dictatorial policies the Zlatev Government ran into new difficulties which offered the King another opportunity to strengthen his precarious and delicate position. On April 18 the government arrested former Premiers Tsankov and Georgiev, the former on a charge of attempting to revive the dissolved Democratic Party and the latter because he attempted to publish a defense of his policies in response to the strictures against him broadcast by Premier Zlatev. Three civilian members of the cabinet resigned in protest at this extreme policy. Their action, combined with the tense situation in the capital where large-scale riots threatened, forced the resignation of the entire Zlatev Ministry late the same day. Passing over the leaders of rival military factions, King Boris entrusted the Premiership to Andrew Tochev, a civilian unaffiliated with any political faction. The new civilian cabinet contained only one member of the Zlatev Ministry and none at all of the Georgiev Ministry. The military leaders, angered at their exclusion, prepared to force the King to accord them recognition. Boris nipped this conspiracy in the bud by placing the ringleaders under arrest and stationing troops in all the public buildings. On April 22 he signaled his victory by freeing the two arrested ex-Premiers and ordering steps towards a return to constitutional government.

The struggle between the King and the Georgiev-Veltchev group was not ended, however. They remained antagonistic on vital questions of internal and external policy. Under the Tochev Ministry, dominated by the King, preparations were made for a return to parliamentary government and the campaign of extermination waged against the Imro (Internal Macedonian Revolutionary Organization) by the Georgiev Government was ended. Through the government's tolerance and even sympathy, the Mihailovist faction of the Imro began to regain its dominant position in Bulgarian politics. Equally distasteful to the Georgiev-Veltchev group was the King's action in reverting to the pro-Italian foreign policy abandoned by the Georgiev dictatorship in favor of a Bulgarian-Yugoslav rapprochement. On the eve of a great demonstration in Sofia in celebration of both the King's accession to the throne and the proclamation of Bulgarian independence, the government on October 2 declared martial law throughout the country and announced that it had nipped in the bud a widespread conspiracy to overthrow the King. The following day Premier Tochev accused ex-Premier Georgiev and Colonel Veltchev of planning to murder the King, the Queen, the members of the Cabinet, and other leading public figures and army officers. The two alleged ringleaders and more than 250 of their adherents in the capital and the provinces were placed under arrest.

Although it was widely believed in Bulgaria that the Premier had exaggerated the charges against the Georgiev-Veltchev faction in order to pave the way for drastic measures against them, the government on October 18 magnified the extent of the conspiracy by dismissing 79 army officers. It announced that 41 additional officers would be dismissed soon and that 37 remained under arrest. Court martial proceedings against 23 officers were instituted on October 22. Three of them, including Colonel Veltchev, were charged with offenses punishable by death. Several high army officers were reported to have resigned in protest against the government's action. Moreover it was

reported that some members of Premier Tochev's Cabinet disapproved his pro-Italian policy and had induced King Boris to continue Bulgarian collaboration with the neighboring states of the Little Entente and Balkan Entente, particularly with regard to the application of League sanctions against Italy. It was significant that Bulgaria joined with the other League members in restricting its economic relations with Italy, effective November 18.

The Kiosseivanov Ministry. Continued internal dissension, combined with pressure for a return to constitutionalism from the former political parties, forced the resignation of the Tochev Cabinet on November 23. A new ministry was formed the same day by George Kiosseivanov, Foreign Minister under Premier Tochev. The new ministry was regarded as a provisional one designed to hold new elections early in 1936 and prepare the way for a return to constitutional government. The new War Minister, General Lukov, took a firm stand against participation of the army in politics. Nevertheless unrest continued in the army, particularly after the trial of Colonel Veltchev, former Finance Minister Todorov, and 28 other high military officers was begun at Sofia December 18. The trial was viewed as an effort by King Boris and his pro-Italian supporters to crush the movement for rapprochement with Yugoslavia which was led by Colonel Veltchev.

The Spread of Communism. While the King was engaged in his successful struggle against his opponents, communism continued its spread among the peasants, laborers, students, and even the army officers with a rapidity which aroused widespread misgivings. Early in the year all labor organizations in Philippopolis were suppressed on the ground that they had become hotbeds of communism. From at least ten other towns or villages came reports of the discovery of Communist plots. On September 13 more than 80 alleged Macedonian Communists were arrested in Sofia and Petritch, charged with conspiring to establish a soviet republic. It was obvious that the harsh measures resorted to against the movement in 1934, when 50 alleged Communists were sentenced to death, had had no effect in checking Bolshevik propaganda.

Relations with Turkey. Charged by Greece with having increased its army beyond the 33,000 men allowed by the Treaty of Neuilly, Bulgaria further aroused the suspicions of the other Balkan States by concentrating troops along the Greek border during the civil warfare in that country in March, 1935 (see GREECE under *History*). Turkey, an ally of Greece, then concentrated troops along the Bulgarian border, arousing the Sofia Government to the point of calling the matter to the attention of the League of Nations. While this incident was tidied over without difficulty, the Turks maintained their troops near the Bulgarian frontier and constructed extensive defense works. In August, after a conference of Bulgarian military leaders with the King, it was decided to construct permanent fortifications for the defense of the town of Haskovo in Southern Bulgaria. See TURKEY under *History*.

BURGENLAND. See AUSTRIA.

BURMA. A province of British India. Total area, 261,610 sq. miles including Burma proper, with Chin Hills, and Kachin Hill Tracts (192,158 sq. m.), Shan States (62,335 sq. m.), and unadministered territory (7117 sq. m.). Total popula-

tion (1931), 14,667,146. Rangoon, the capital, had 400,415 inhabitants; Mandalay, 147,932. There were 728,834 pupils in the schools and colleges during 1932-33. Buddhism was the religion of 85 per cent of the population.

Production. Rice was the main agricultural product. Cotton, millet, tobacco, and sesamum were also grown. Teak was an important export product from the forests. Tin (2944 tons), tungsten ore (895 tons), silver (6,054,907 oz.), and petroleum (962,218 metric tons) were the principal mineral products in 1933. In the same year there were 942 factories with a total of 86,433 persons employed.

Communications. In 1934 there were 2056 miles of railway open to traffic: 2120 miles of paved and 7729 miles of unpaved highways; and 60 miles of navigable canals. The Irrawaddy, the main artery of commerce, was navigable for 900 miles from the sea; its tributary, the Chindwin, for 300 miles.

Government. For the fiscal year ended Mar. 31, 1934, revenue totaled Rs85,966,000; expenditure, Rs99,310,000. The revised estimates for 1934-35 indicated a surplus of Rs2,920,000. Budget estimates (1935-36): revenue, Rs80,514,000; expenditure, Rs90,139,000 (rupee averaged \$0.3788 paper for 1934; \$0.3696 for 1935). In 1923 Burma was constituted a Governor's Province under the government of India Act of 1919. There was an appointive executive council, and a legislative council of 103 members (80 elected; 23 nominated, and ex-officio). The Shan States were administered by the local chiefs under the supervision of the Commissioner of the Federated Shan States. Governor in 1935, Sir H. L. Stephenson.

History. Reversing the position adopted in 1934, the Legislative Council of Burma in April, 1935, defeated by a vote of 47 to 37 a proposal for federation with India under the new Indian Constitution (see INDIA under *History*). The British scheme for constitutional reform called for the establishment of Burma as a separate state under its own constitution. In 1934 a majority of the Legislative Council voted for federation with India, believing that afterwards Burma would be able to withdraw from the federation with a greater degree of self-government than that promised by the new Burman Constitution. The Council in April, 1935, also rejected a motion expressing dissatisfaction with the draft constitution for Burma, but passed for the second time a proposal to oust the British President of the Council, Sir Oscar de Glanville. The Governor accepted the latter motion, despite his disapproval of the Council's action, and U Chit Hlaing, leader of the majority party, was named to the post. A joint British-Chinese commission to fix the boundary between Burma and Yunnan Province in China was appointed in April, 1935.

BUSINESS REVIEW. The various uncertainties in business which had seemed to grow more pronounced during the late months of 1933, prolonged themselves only during the mid-winter and the very early spring of 1934, and were followed by a decided betterment of economic conditions which left the year 1935, in the opinion of most observers, the unmistakable beginning of a period of recovery. It is well to bear in mind that, in the present unsettled state of economic life, apparent predictions of this sort may not prove permanently well-founded, but so far as contemporary data are concerned, the returns of 1935 made it clear that there was a distinct improvement of the essential elements of production

and trade. Thus far, at any rate, we seem warranted in speaking of the year as marking the long desired "turn for the better." Doubt still exists as to the cause for such improvement, and consequent doubt may be entertained as to its desirability; but this discussion refers entirely to matters of the past and present.

In reviewing the year 1935, we may make a major division at the beginning of spring, treating the months of January, February, and part of March, as more truly belonging to the preceding year, economically speaking, while the subsequent months are represented in almost continuous development of improvement in production, dividends, and quotations of securities. Such changes were not uniform in all branches. Manufacturing improved in the spring of the year. During the early months which are here spoken of, as the first period, in fact the combined index of production, computed by the Federal Reserve Board, revealed a growing tendency. Whereas the figure for the month of December, 1934, was only 78, this level was raised in January to 88, and in February and March to 91. Subsequent months did not do as well, until the year was far advanced, but there was no month in the year that did not materially exceed the production index for the corresponding period a year earlier. The price level went slightly higher during the early months of the winter, and appeared throughout to be more stable than during the latter part of 1934. During the final months some branches of production and some phases of prices appeared to be in the early stages of "boom"; but, it should be added, largely as the result of fortuitous conditions presently to be mentioned.

Most observers of business development during 1935 are disposed to place a large degree of emphasis upon the governmental and political occurrences of the twelvemonth as direct factors influencing the course of events. Suits before the Supreme Court culminated in April in a decision adverse to the so-called "NRA," leaving it without constitutional warrant, and practically cutting the foundation from under the great structure of bureaucratic control which had been built up by it. The announcement of the decision was at first received with some degree of uncertainty, not a few—even of those who disliked the "NRA"—feeling that perhaps it had furnished an element of strength in the reorganization of industry whose withdrawal might be injurious.

As against this development, but coming somewhat later, must be mentioned as major business factors, the enactment of far-reaching Federal laws including: (1) the new tax bill, with highly confiscatory rates, directed against large incomes and large inheritances; (2) the so-called Social Security Act (August 14), intended to establish an old-age pension system and an unemployment insurance system with heavy taxes extorted from the business public by impositions upon payrolls; and (3) an extensive revision of the banking law which although finally greatly reduced in its scope, nevertheless introduced some very far-reaching alterations. To these should probably be added, as important but not so fundamental, the act (August 26) disestablishing the public utilities holding companies—a process directed to begin on December 1 at the hands of the Securities Exchange Commission. These factors undoubtedly operated as retarding elements against the process of recovery; yet, insufficient to cancel the constructive factors furnished in the defeat of the "NRA" and

the ending of the controversy about the standard of value for the time being. Altogether, the condition of manufacturing and production generally was the best for the year as a whole that had been experienced since the pre-panic period. In the following table a composite index of industrial production, compiled and published by the Federal Reserve Board, has been reproduced in brief.

INDEX OF INDUSTRIAL PRODUCTION

[Index numbers adjusted for seasonal variations, 1923-1925 average = 100]

Mos	1927	1928	1929	1930	1931	1932	1933	1934	1935
Jan	107	106	117	102	82	71	64	78	91
Feb.	109	109	117	110	86	71	64	81	89
Mar	111	109	119	109	87	68	60	84	88
Apr	109	109	122	110	89	64	67	86	86
May	111	109	123	106	89	61	80	86	85
June	108	108	126	99	84	59	91	84	86
July	106	109	124	89	83	56	96	76	86
Aug	107	112	123	88	79	59	90	73	87
Sept	105	114	121	91	76	68	84	71	90
Oct	103	114	117	87	73	68	76	74	97
Nov	99	112	106	84	72	65	72	75	97
Dec	99	113	99	82	71	60	75	86	97
Year	106	111	119	96	81	61	76	79	95

Distribution. Ever since the beginning of the depression, the first care of the public authorities had been to stimulate the distribution of goods, both for the sake of the unemployed consumers and as a means of maintaining the structure of trade the country over. This situation was continued during the year 1935 as a result of the large distributions of Federal aid or "relief," as well as of the gradual introduction of a new system of "works relief" supported by congressional appropriation of \$4,800,000,000, to be used as the President might see fit. The expenditure of these sums and the natural tendencies to recovery, origi-

DEPARTMENT STORES—SALES, STOCKS

[Index numbers, 1923-1925 average = 100]

Month	Index of sales ^a		Without seasonal	
	Adjusted for seasonal variation	1933 1934 1935	adjustment	1933 1934 1935
January	60	69 74	49	57 59
February	60	71 75	49	59 61
March	57	77 82	50	73 71
April	67	77 73	68	73 79
May	67	77 76	67	77 76
June	68	74 80	64	70 76
July	70	72 80	49	51 55
August	77	79 78	59	60 61
September	70	76 81	73	79 85
October	70	74 77	77	82 86
November	65	73 81	75	83 91
December	69	76 84	121	135 145
Year	67	74	67	75 79

Month	Index of stocks (end of month)		Without seasonal	
	Adjusted for seasonal variation	1933 1934 1935	adjustment	1933 1934 1935
January	58	66 64	52	59 57
February	57	66 64	54	63 61
March	54	65 63	55	67 65
April	53	65 64	55	68 66
May	55	66 64	56	68 66
June	57	65 63	56	63 61
July	60	64 61	56	59 57
August	64	64 62	62	61 60
September	70	64 64	73	67 67
October	70	64 66	77	71 72
November	69	65 67	78	74 75
December	65	64 65	62	60 61
Year	61	65	61	65 64

^a Based throughout on figures of daily average sales—with allowance for changes from month to month in number of Saturdays and for six national holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas. Adjustment for seasonal variation makes allowance in March and April for the effects upon sales of changes in the date of Easter.

nating with the fact that preceding years had made some necessary readjustments of the basis of prices, tended to keep demand good up to the end of the autumn season, while the influence of improving dividends and rather better employment situation, combined with Federal expenditures, helped to make the end-of-the-year trade preceding the holidays the best that had been experienced for a number of seasons. As in preceding years, it was true that the growth in volume was preponderantly in the cheaper type of goods and that there was a lack of uniformity in rates of improvement throughout the country. Foreign demand was especially unsatisfactory until toward the close of the year, when imminent danger of war in Europe brought an artificial improvement in export figures as regards staples, resulting in a total volume of export trade approximately equal to that of 1934.

Commodity Prices. More than ever, during the year 1935, did the official efforts to further what was called "inflation" continue to be disappointing. While the gains in prices that had taken place during 1933 and 1934 were not very marked, they had, at any rate, amounted to something, even when full allowance had been made for the purely political advances brought about through reducing acreage and introducing scarcity prices for agricultural products. The year 1935 had not altered this situation materially, but a composite index of prices for the year (Bureau of Labor) continued in the neighborhood of 80, with a low point of about 79 at the beginning of the year and a high point of 81 at the end. The accompanying table reflects the official figures for movements of wholesale prices as compiled by the U.S. Bureau of Labor Statistics.

MOVEMENT OF WHOLESALE PRICES

Month	1929	1930	1931	1932	1933	1934	1935
January	97.2	93.0	77.0	67.3	61.0	72.0	79.0
February	96.7	92.0	75.5	66.3	60.0	74.0	80.0
March	92.5	91.0	74.5	66.0	60.0	74.0	79.0
April	96.8	91.0	73.3	65.5	60.0	73.0	80.0
May	95.8	89.0	71.3	64.4	63.0	74.0	80.0
June	96.4	87.0	70.0	63.9	65.0	75.0	80.0
July	98.0	84.0	70.0	64.5	69.0	75.0	79.0
August	97.7	84.0	70.2	65.2	70.0	76.0	81.0
September	97.5	84.0	69.1	65.3	71.0	78.0	81.0
October	96.3	83.0	68.4	64.4	71.0	77.0	81.0
November	94.4	80.4	68.3	63.9	71.0	77.0	81.0
December	94.2	78.4	66.3	62.6	71.0	77.0	81.0

Manufacturing. As has already been observed, notable improvement in manufacturing developed during the year 1935. Undoubtedly there is a widespread impression that this gain was the immediate consequence of changes in Federal policy which grew out of a Supreme Court decision adverse to the National Recovery Administration. Contemporary opinion is to the effect that the announcement of the adverse view of the Court was immediately followed by resumption of activity on the part of many enterprises which had previously been depressed because of lack of confidence in the future. Whatever truth there may be in this interpretation, it must also be borne in mind that the condition of shortage which had been produced in many industries by reduction of output during preceding years and of "backed up" demand which had been growing greater and greater, had eventually overflowed in a vigorous call for commodities. This led to the broadening of output to which reference has already been made. And yet, it should also be noted, the increase in industrial production, so much talked about, was not after all greater than had occurred in various former years. The Reserve Board's

average for total industrial output in 1933 was 76, in 1934, 79, and for the year 1935 was about 90; an enlargement therefore of over ten points above the level of the preceding year.

The fact that the growth in industrial production was not phenomenal, is attested by the circumstance that unemployment continued to be heavy and was estimated by the American Federation of Labor about the end of the year, as in the neighborhood of about twelve millions,—an increase over the figures the same organization had previously made public. The Industrial Conference Board, at about the same date, estimated unemployment at something like two million persons less than the Federation of Labor. Their estimates show that the reduction in unemployment which had taken place during the year was only a small part of the total. President Roosevelt had estimated the total reduction in November as something like 3,500,000 and the American Federation of Labor practically concurred in this estimate, but in order to do so, found it necessary to raise its estimates of peak unemployment very much above what they had ever been before. The unemployment existing at the end of the year, whatever it was, was large, and the amount of reduction in it, according to all estimators, was but a small fraction of the aggregate. It was particularly severe in the so-called heavy industries, as in preceding years, notwithstanding gradual improvement of the conditions in these industries. The monthly figures of the United States Steel Corporation furnish a rough index of the position in the heavy industries, and were as follows:

U. S. STEEL CORPORATION SHIPMENTS (TONS)

Month	1935	1934	1933	1932
January ...	534,055	331,777	285,138	426,271
February ...	583,137	385,500	275,929	413,001
March ...	668,056	588,209	256,793	388,579
April ...	591,728	643,009	335,321	395,091
May ...	598,915	745,063	455,302	338,202
June ...	578,108	985,337	603,937	324,746
July ...	547,794	369,938	701,322	272,448
August ...	624,497	378,023	668,155	291,688
September ..	614,933	370,306	575,161	316,019
October ...	686,741	343,962	572,897	310,007
November	681,820	366,119	430,358	275,594
December	661,515	418,630	600,639	227,576
Year adjustment	.....	-19,907	+44,283	-5,160
Total ..	7,371,299*	5,905,966	5,805,235	3,974,062

* Before year-end adjustment, not yet available.

Agriculture. Following upon the unfavorable year 1934 in which the country suffered heavily from drought, the early months of 1935 seemed to be on the point of repeating the experience of the twelvemonth earlier. The same dust storms in the Southwest, the same early drought damaging winter wheat and other grains, and the same general unstableness in many parts of the country produced the gloomiest forebodings. These fears were put to rout before spring had ended, and early summer found excellent growing conditions prevalent in nearly all parts of the country. The effect of the early drought persisted in some regions but these were fairly narrowly circumscribed and as the year advanced it turned out that very substantial output was to be expected in most grains, in cotton, and in a large number of the "minor crops," fruit produce, etc. Prices, on the other hand, were from the beginning firm, partly due to the reduction of acreage and destruction of animals that had been carried on during the preceding year—a policy whose continuance was announced early in 1935.

The reaction of prices which some had expected

as a result of improvement in output in the latter part of the season was partly offset by an increase of foreign demand, perhaps growing out of the existence of war preparations in different parts of the world. Increases in prices of notable character took place in many essential foodstuffs, while staple materials of manufacture also gained ground quite decidedly. Despite the fact that the government reduced its basis of lending on cotton from 12 cents per pound to 10 cents—although with an additional 2 cents bonus payable under certain guarded conditions, cotton prices did not fall very materially, but maintained themselves. The closing price of wheat (No. 2 red) in New York was \$1.17½ per bushel at the end of the year, while cotton (middling upland) closed at 12.10 cents per pound. The actual gross income of farmers for the year was reported as follows by the U.S. Department of Agriculture:

GROSS INCOME FROM FARM PRODUCTION

[In millions of dollars]

Source of Income	1932	1934	1935*
Crops:			
Grains	452	536	700
Fruits and nuts	324	464	500
Vegetables	611	701	775
Sugar crops	69	61	70
Cotton and cottonseed	464	706*	750*
Tobacco	108	224*	235
Other crops	267	351	370
Total crops	2,295	3,043	3,400
Livestock and livestock products:			
Meat animals and wool	1,153	1,514	1,800
Poultry and eggs	609	664	800
Dairy products	1,260	1,421	1,600
Other	20	30	30
Total livestock	3,042	3,629	4,230
Total crops and livestock ..	5,337	6,672*	7,630

* Revised b Estimate includes price-adjustment payment for 1935 c Preliminary

General Business. Improvements in industrial earnings had begun in 1934. The first quarter of 1935 depicted a further advance while in subsequent quarters these gains began to show themselves in larger distributions of dividends. Not a few concerns which had previously suspended dividends now resumed them and others which had been satisfied with a curtailment announced an enlargement of the distributions. Some enterprises which had been habitually keeping up their dividends and paying them out of surpluses, found it possible to earn an amount equal to their disbursements. This improvement would have been a good deal faster and larger had it not been for the increasing weight of taxation which resulted in enlarging the expenses of production for nearly every kind of business. Concerns that suffered particularly from this enlargement of costs were the railroads and public utility enterprises, especially the former, which even while enlarging their gross incomes often found their net incomes declining. On the other hand, various enterprises, alarmed by the hostile attitude of Congress toward accumulated earnings and savings, became much more disposed to distribute surplus earnings instead of keeping them available as balances on their books. Thus, some part of the enlargement of dividends which occurred during 1935 must be reckoned as artificial.

Business Failures. Notwithstanding several important receiverships which were announced among the railroads and larger industrial concerns during 1935, the general situation as to business failures showed distinct improvement. Not only

were failures fewer in number, but they were less serious in losses. It continued to be true that the working of the national bankruptcy law of 1932 cut off many failures that would otherwise have occurred and led to the labeling of many a collapse as a "reorganization" which in other circumstances would have been a receivership or an ordinary failure. The increase in activity and in output which was occurring, however, enabled many concerns to make an unexpectedly good showing, and this reacted upon the statistical position. Banks conspicuously which had suffered so severely during preceding years were now able to show a change which greatly reduced the failure ratio, owing to the fact that the weaker institutions had already gone to the wall. The failure compilations furnished by Dun and Bradstreet afford a further view of this situation as follows:

TOTAL NUMBER OF COMMERCIAL FAILURES IN THE UNITED STATES, WITH LIABILITIES, FOR FOURTEEN YEARS, AS REPORTED TO DUN AND BRADSTREET, INC

Year	Number	Liabilities	Average
1935	11,879	\$230,120,886	\$19,372
1934	12,185	264,248,176	21,686
1933	20,307	502,830,584	24,761
1932	31,822	928,312,517	29,172
1931	28,285	736,309,102	26,032
1930	26,355	668,283,842	25,357
1929	22,909	483,250,196	21,094
1928	23,842	489,559,624	20,533
1927	23,146	520,104,268	22,471
1926	21,773	409,232,278	18,795
1925	21,214	443,744,272	20,918
1924	20,615	541,225,449	26,351
1923	18,718	539,386,806	28,818
1922	23,676	624,896,251	26,351
1921	19,652	627,401,883	31,926

BUTTERFIELD, KENYON LEECH. An American agriculturist and college president, died at Amherst, Mass., Nov. 25, 1935. He was born at Lapeer, Mich., June 11, 1868, and in 1891 graduated from Michigan State College and accepted the position of assistant secretary there. From 1892 to 1895 he edited the *Michigan Grange Visitor*, and was editor of the Grange Department of the *Michigan Farmer* from 1896-1903. During that time he was college field agent at Michigan State College (1896-99), and from 1895 to 1899 was superintendent of the Michigan Farmers' Institute. In 1902 he lectured on rural sociology at the College.

Invited to the presidency of the Rhode Island College of Agricultural and Mechanical Arts he accepted and served also as professor of political economy and rural sociology there from 1903 to 1906, when he was offered and accepted the presidency of Massachusetts Agricultural College at Amherst. For 18 years he served in this capacity, and under his able administration the College made such progress that the student body was trebled and the campus increased by 300 acres. In 1909 he acted as Carew lecturer at the Hartford Theological Seminary. From Massachusetts he was called to Michigan State College as president in 1924, and resigned four years later to become counsellor on rural work for the International Missionary Council, which made studies of rural missions in the Far East, particularly in India.

Always interested in the subject of rural sociology, Dr. Butterfield was appointed to the Country Life Commission by President Theodore Roosevelt in 1908. Personal experiences and his experiences while serving on this Commission led him to organize the first National Country Life Conference at Baltimore, Md., Jan. 6-7, 1919, the success of which led to the formation of the American Country

Life Association. In 1917, the Young Men's Christian Association sent him to France to take charge of their educational programme, which, after the War, was taken over by the United States Government. He remained with the Commission until 1919, and while in France aided in founding the World Agriculture Society, of which he served as president.

A member of many commissions, Butterfield served on the American Commission to Study Rural Credit in Europe (1913); the China Education Commission sent by the Foreign Mission Boards of America, for which he wrote a special report on agricultural education in China (1921); and was chairman of the groups studying New England's food supply and marketing problems (1922). Also, he was president of the American Country Life Association, and later, its honorary president.

Dr. Butterfield was the author of *Chapters in Rural Progress* (1908); *The Country Church and the Rural Problem* (1911); *The Farmer and the New Day* (1919); *A Christian Program for the Rural Community* (1923).

BYNG, bing, JULIAN (HEDWORTH GEORGE), BYNG, FIRST VISCOUNT, OF VIMY, OF THORPE-LE-SOKEN. A British Field-Marshal who died at Thorpe-le-Soken, Essex, England, June 6, 1935. Born in England on Sept. 11, 1862, he was educated at Eton, and in 1883 joined the 10th Royal Hussars as a subaltern. At this time he became deeply interested in military tactics and devoted his leisure to the study of the development and application of modern invention and science as it affected the conduct of war. He was stationed for a time at Lucknow, India, but saw his first active service in the Sudan (including El Teb and Tamai) in 1884, and received a medal with clasp and the Khedive's Star for bravery. Passing through the Staff College in England, he became a major in 1898, and organized, November, 1900, the South African Light Horse, composed of hardy colonials, for service in the South African War. Here he won reputation for discipline, and in 1901 was promoted to the rank of colonel and received the Queen's Medal with six clasps, and the King's Medal, and membership in the Royal Victorian Order in 1902.

After holding various cavalry commands, and being promoted to major-general, he was appointed general officer commanding the army in Egypt from 1912-14. When the World War broke out he was ordered home to take the Third Cavalry Division to France, where they landed in October, 1914. Together with the Seventh Cavalry Division, under General Rawlinson, they covered the Belgian retreat from Antwerp to Ypres. Later, they formed a part of General Allenby's forces that held the southern half of the salient during the first battle of Ypres. In May of 1915, Byng succeeded Allenby as head of the cavalry and fought the second battle of Ypres. In that summer he was sent to the Dardanelles in command of the 9th Corps, and remained there until the withdrawal of that fateful expedition. His masterly command of the bloodless evacuation of the Suvla area on Dec. 18-19, 1915, earned for him promotion to lieutenant-general, and he was created a Knight Commander of St. Michael and St. George, and in the following year, a Knight Commander of the Bath.

Shortly before the Somme offensive in May of 1916, Byng was called back to the Western Front to command the Canadian Army Corps. This Corps formed part of the Fifth Army under Sir Hubert Gough. In the fall of the year, the Canadians were

moved north to the neighborhood of Vimy Ridge as part of the Third Army. In the spring of 1917, the Third Army, under General Allenby, opened an offensive on the Arras sector, and on April 6, the Canadians, under General Byng, began the storming of Vimy Ridge. Under adverse weather conditions, the Canadians began their onslaught and succeeded on the first day in reaching Hill 145. The following day they were successful in capturing the Hill, giving to the Allied cause the once impregnable Vimy Ridge. As a result of the battle, about 4000 prisoners were taken, together with much artillery, and the German position in the French industrial sections was made precarious. In recognition of his services here, the General was given command of the Third Army.

The surprise element in attack had been largely discontinued, but in the fall of 1917, the British decided to combine the surprise element with the use of tanks on a large scale. This plan was entrusted to General Byng and the Third Army, and on Nov. 20, 1917, the attack, led by almost 400 tanks, got under way, and the enemy's line was penetrated far deeper, and at less cost than heretofore. This attack was said to be "the most sensational and dramatic episode of the year's fighting." It served to show how trench deadlock could be broken by the use of tanks, and the experience was put to good use in breaking the Hindenburg line a year later.

Byng was made a full general in November, 1917, and after the War, in 1919, the title of Baron Byng of Vimy was conferred upon him. In addition he received the thanks of Parliament, and a grant of £30,000. He was made a Knight Grand Cross of the Bath and received decorations from many nations, including the Distinguished Service Medal of the United States. In 1921, General Byng, who had retired to the army reserve list, was appointed Governor-General of Canada, and made a Knight Grand Cross of St. Michael and St. George. He served as Governor-General for five years, and during his administration he precipitated a constitutional crisis in the Dominion that resulted in the establishment of the principle that the Crown, in the person of the Governor-General, could not refuse a dissolution of Parliament asked for by a Prime Minister. This was brought about by Byng's refusal in 1926 to accede to the request of William L. Mackenzie King, the Prime Minister (Liberal), to dissolve Parliament. An election had recently been held but no party had received a majority, so Lord Byng felt it would be disturbing to have a second election within a year, inasmuch as Arthur Meighen (Conservative) was the leader of the most numerous party in Parliament, and thought he could command a majority, it was but fair to call him to office. Mr. King challenged the Governor-General's right to refuse the advice of the Prime Minister to dissolve. Shortly after taking office as Prime Minister, Mr. Meighen was defeated and Parliament was dissolved, which led to the 1926 elections and Mr. King was returned to office. Upon the completion of his term as Governor-General, Lord Byng was offered a re-appointment, which he refused. In 1926 he was raised to the rank of Viscount.

Two years later, he accepted the appointment of Commissioner of the Metropolitan Police of London. He held this office for three years, during which time he reorganized the department and raised the morale of its members. In 1932 he was made a Field-Marshal. In 1902 he married Lady

Marie Evelyn Moreton, the author of *Barriers* (1912) and *Anne of the Marshland* (1913).

BYRD EXPEDITION. See GEOGRAPHIC SOCIETY, NATIONAL; PHOTOGRAPHY; POLAR RESEARCH.

CAIRO. See ARCHÆOLOGY.

CALIFORNIA. Population. On Apr. 1, 1930 (Fifteenth Census), 5,677,251; July 1, 1934, by latest Federal estimate, 6,158,000; 1920 (Census), 3,426,861. Sacramento, the capital, had (1930) 93,750 inhabitants; Los Angeles, 1,238,048; San Francisco, 634,394; Oakland, 284,063.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu.	Value
Oranges	1935	. . . .	38,723,000 ^a	\$77,446,000
	1934	. . . .	45,390,000 ^a	79,432,000
Hay (tame)	1935	1,597,000	4,259,000 ^b	34,498,000
	1934	1,733,000	3,722,000 ^b	37,220,000
Grapes	1935	. . . .	2,065,000 ^b	24,032,000
	1934	. . . .	1,700,000 ^b	29,647,000
Lemons	1935	. . . .	8,000,000 ^c	19,200,000
	1934	. . . .	10,450,000 ^c	21,109,000 ^c
Cotton	1935	219,000	205,000 ^c	12,382,000
	1934	223,000	259,000 ^c	16,816,000
Dry beans	1935	339,000	3,966,000 ^d	16,261,000
	1934	299,000	3,752,000 ^d	15,946,000
Barley	1935	1,182,000	36,642,000	13,924,000
	1934	1,055,000	22,682,000	10,434,000
Peaches	1935	. . . .	17,876,000	11,509,000
	1934	. . . .	20,627,000	11,511,000
Sugar beets	1935	117,000	1,453,000 ^b	8,242,000
	1934	106,000	1,579,000 ^b	8,242,000
Wheat	1935	697,000	13,592,000	10,466,000
	1934	524,000	8,384,000	6,623,000
Rice	1935	98,000	6,664,000	3,599,000
	1934	105,000	7,665,000	5,136,000
Pears	1935	. . . .	7,024,000	4,847,000
	1934	. . . .	9,709,000	7,187,000
Potatoes	1935	45,000	10,350,000	6,210,000
	1934	41,000	8,610,000	4,994,000
Corn	1935	95,000	3,040,000	2,280,000
	1934	95,000	2,850,000	2,822,000

^a Boxes ^b Tons. ^c Bales ^d 100-lb bags

Mineral Production. More petroleum was produced in the State in 1934, the year's total rising to 175,509,000 barrels, from 172,010,000 for 1933. Except for a minor quantity exported from the country, all the product of 1934 was refined in the State. Closely related to the production of petroleum, that of natural gas increased to 281,354,800 M cu ft for 1934, from 270,059,500 M cu ft. for 1933. No great addition to the underground reserve of petroleum was made in 1934, but new fields producing mainly gas, the Edison in Kern county and the Kettleman Hills Middle Dome, were developed. Of the gas produced in 1934, nearly 60 per cent was sold to public utilities and other consumers, and nearly 17 per cent was used in the production of gasoline. In 1934 were produced 498,200,000 gallons of gasoline derived from natural gas.

The rise in the mines' yearly production of gold, which had followed the depreciation of the dollar, continued. It lifted the annual output to 869,400 fine ounces of the metal (1935), from 719,064 (1934). By value, the totals were \$30,429,000 (1935, at \$35 an ounce) and \$25,131,284 (1934, at an estimated average price of \$34.95 an ounce). Of the year's production of gold (1935), 51 per cent came from 39 enterprises operating lode mines; 29 per cent, from 27 dredging enterprises.

Education. For the academic year 1934-35, the enrollments of pupils in the public schools throughout the State totaled 1,412,239. They were thus distributed: in kindergartens, 63,743; in elementary grades and high-school grades through the eighth, 767,752; in high schools and junior college courses, 580,744. The expenditures of the year for

public-school education totaled \$125,847,571; of this sum, \$64,950,987 was expended on elementary schools and \$60,896,584 on high schools. For the year previous, the annual salaries of full-time teachers averaged \$1632 in the kindergartens, \$1643 in the elementary grades, and \$2182 in the high-school grades, those of the junior high schools included. Buildings were supplied in 1935 to many schools that had been held in tents or temporary premises. Though the State was handicapped by a deficit, all public schools were able to carry on their regular programmes. The movement to remould the curriculum to fit "social needs" was active in the State.

Charities and Corrections. In 1935 the Department of Social Welfare was the State of California's central administrative authority in matters of the care or custody of persons. It had as executive head a Director, appointed by the Governor. A board of six members, also holding by appointment, gave deliberative consideration to the departmental problems. The Department examined and reported on the operation of the charitable and correctional institutions of the State, the counties and the cities and on the working of probation for offenders, it managed the State's grants of aid to the needy aged, to the blind, and to children who lacked support; it inspected and licensed all boarding homes and institutions for children and the aged, and advised the courts as to all applications to adopt children.

As reported on September 21, 877 persons over 65 years of age were receiving aid to the needy aged at an average of \$10.07 a month to each from the State and an equal amount from the counties. Blind persons, 3644 in number, were getting an average of \$16.58 a month from the State and the like from the counties. Dependent children, orphans included, were receiving, to the number of 18,999, monthly support from the State at the rate of \$10 a month to the child, which counties might supplement as they chose.

Legislation. New taxes were imposed and old taxes increased in order to meet an estimated \$93,000,000, for the ensuing two years, of expenditure in excess of revenue. The enactment of a tax on chain stores compelled each company to pay \$500 a year on every store that it operated in excess of nine. A proposal to increase the sales tax to the rate of 3 per cent, from 2½, was carried, despite strong opposition. The inheritance tax was increased, so were taxes upon banks and franchises. A new system for the taxation of automobiles was created.

Regarding pensions for old people, the Legislature, like the Governor, showed strong sympathy with the Townsend proposal for high pensions (\$200 a month). It passed a resolution requesting the Federal Congress to enact the Townsend plan; but in dealing with the State's own pensions for the aged it contented itself with increasing payments to \$35 a month (from \$30) as a maximum and setting a minimum of \$20 a month, the qualifying age being 65 years. There was enacted a law to create a system of compensation for unemployed persons, in accordance with the Federal Social Security Act. New facilities for mortgaged owners of property, in dealing with creditors, were given by an act prolonging in altered form the expiring moratorium on mortgages: power was given the courts to determine, in proceedings as to mortgages, how little the owner need pay, in addition to taxes and insurance, to retain the use of the mortgaged property.

A law of 1927 requiring three days' notice as a prerequisite to marriage was repealed as having impelled persons to be married outside of the State. The Legislature made a trial, during the session, of voting on measures by use of a voting machine; it was said to save time that would have been taken up by the older methods, but there were hints that votes had been cast for absent members by friends or colleagues.

Political and Other Events. The operation of the State's newly enacted tax on chain stores was prevented by the signing of petitions in sufficient number to call for the submission of the law to a referendum to be held at the next general election (November, 1936). In the meanwhile the law was to remain in abeyance. The State Director of Social Welfare adopted as to the administration of the new law for pensions to the aged the policy of according such pensions only in amounts determined to be needed. Thus it was hoped to reduce materially the estimated charge of \$17,000,000 a year for this form of aid. The State Board of Equalization was reported to have decided to take into its own control the enforcement of laws as to the liquor traffic.

The State Supreme Court affirmed on appeal the validity of a sentence of death upon Tanner and Brooks, who had seized a victim in 1933 and tortured him to obtain money. The State brought suit in the Federal courts on August 18 to recover a sum representing processing taxes on goods bought as supplies for State institutions.

The EPIC movement headed by Upton Sinclair lost ground: it failed to obtain a majority in the city council of Los Angeles in the spring elections; a convention of the EPIC group at Los Angeles on May 18 developed sharp differences with radicals declared by Sinclair to be Communists; Sinclair withdrew from leadership on August 1 and was succeeded by State Senator Culbert L. Olson.

The movement for a Federal grant of pensions to the elderly at \$200 a month, started in California by Dr. F. E. Townsend, made headway there and in other States. Townsend, supported by a convention of representatives of 5000 clubs of his followers from many States, declared, on Dec. 12, 1935, his intention to put into the election of 1936 candidates for the National offices and for all the open places in Congress. See OLD AGE PENSIONS under *Townsend Plan*.

The Federal Supreme Court by an order of January 21, dealing with an appeal of Thomas J. Mooney (life prisoner convicted of murder for participation in the San Francisco bombing of 1916), sent the case back to the State Supreme Court. There he obtained a writ of habeas corpus, which led to a series of hearings before a referee. Mooney's counsel adduced much evidence purporting to discredit the testimony of F. C. Oxman and other witnesses for the original prosecution.

Work on the San Francisco Bay Bridge, under construction, was sufficiently ahead of schedule to permit the announcement in October that the bridge would probably be open for automobiles in November, 1936. As to the Golden Gate Bridge, construction was stated to be 52 per cent accomplished. The sale of electricity from the Hetch Hetchy development by the city of San Francisco to the Pacific Gas and Electric Company was condemned in a ruling of the Federal Secretary of the Interior, given out on August 26. He declared that sale of electricity to the company was against the purpose of the Baker Act of 1913 granting the city the right to use water from the Tuolumne River.

Officers. The chief officers of the State, serving in 1935, were: Governor, Frank F. Merriam; Lieutenant-Governor, George J. Hatfield; Secretary of State, Frank C. Jordan; Treasurer, Charles G. Johnson; Comptroller, Ray L. Riley; Attorney-General, U. S. Webb; Superintendent of Public Instruction, Vierling Kersey.

Judiciary. Supreme Court: Chief Justice, William H. Wasté; Associate Justices, William H. Langdon, N. P. Conrey, Jesse W. Curtis, Emmet Seawell, John W. Shenk, Ira F. Thompson.

CALIFORNIA, UNIVERSITY OF. A coeducational institution of higher learning with headquarters at Berkeley, Calif., founded in 1868. Branches are found in various parts of the State. At Mt. Hamilton is the Lick Observatory; at San Francisco, the California School of Fine Arts, Hastings College of the Law, Medical School, the George William Hooper Foundation for Medical Research, College of Dentistry, College of Pharmacy; at Los Angeles, the University of California at Los Angeles, Branch of the College of Agriculture in Southern California, the Los Angeles Medical Department; at Davis, Branch of the College of Agriculture; at Riverside, Branch of the College of Agriculture in Southern California, including the Citrus Experiment Station and the Graduate School of Tropical Agriculture; at La Jolla, the Scripps Institution of Oceanography.

The total number of resident students in the academic and professional departments, fall and spring sessions, 1934-35, was 21,125, of whom 12,227 were men and 8898 were women. At Berkeley 13,218 students were enrolled; at Los Angeles 6863. The enrollment in the University Extension Division in 1934-35 was 36,884 in classes and correspondence courses. The 1935 summer session enrollment (Berkeley and Los Angeles) totaled 4157. At the beginning of the autumn term there were approximately 2000 members on the regular teaching staff and 600 on the extension staffs. The total income for 1934-35 was \$13,061,400, including gifts totaling \$129,000 for permanent improvements, \$1,088,000 for endowments, and \$355,000 for current use. Total assets were listed at \$76,415,000, including \$49,860,000 in real estate, improvements and equipment, and \$20,585,000 in endowment and trust funds. The libraries contained approximately 1,217,000 volumes. President, Robert Gordon Sproul, LL.D.

CALIFORNIA INSTITUTE OF TECHNOLOGY. An institution for collegiate and graduate instruction and research in the pure and applied sciences in Pasadena, Calif., founded as Throop Polytechnic Institute in 1891. The enrollment for 1935-36 was 820, of whom 572 were in the undergraduate and 248 in the graduate school. The faculty numbered about 200. The endowment was approximately \$8,000,000, and the annual income approximately \$750,000. There were 40,000 volumes in the library. The institute has no president, the administration centering in an executive council of eight, of which Robert A. Millikan, Ph.D., LL.D., Sc.D., is chairman.

CAMBODIA. See FRENCH INDO-CHINA.

CAMBON, kan'bôn', JULES MARTIN. A French diplomat, died at Vevey, Switzerland, Sept. 19, 1935. He was born in Paris, Apr. 5, 1845, and at the lycée Louis-le-Grand was educated for the law, which he began to practice in 1866, becoming known for his forensic ability. When the Franco-Prussian War began, Cambon was secretary of the Lawyers Conference but joined a mobile unit in the Seine-et-Marne Department as a captain.

At the close of the war he joined the civil service, serving first as auditor of the provisional commission appointed in 1871 to replace the Council of State. Three years later he was appointed an attaché to the Governor-General of Algeria, and became Prefect of Constantine in 1878. Subsequently he returned to France and was Prefect of the Department of the Nord, 1882, and of the Department of Rhodé, 1887-91. In the latter year he was appointed Governor-General of Algeria, and served in that capacity until he was appointed Ambassador to the United States in 1897.

At the close of the Spanish-American War, M. Cambon acted as representative of the Spanish crown and signed the agreement of Aug. 9, 1898, in the name of the Spanish Government, which ended the rule of Spain in America. The prestige he gained by his diplomacy and adroitness led to the establishment of the Washington Embassy as fourth in international rating. He was made a Commander of the Legion of Honor in 1899.

In 1901, he was transferred to Madrid, and in 1906, during the Moroccan dispute, he was instrumental in encouraging England to take a definite stand in the matter. When he was sent to Berlin in 1907, his reputation in this affair preceded him. While at this post he distinguished himself by tiding over the Agadir crisis of 1911. He remained in Berlin until the outbreak of the World War when he resigned from the diplomatic service.

Because of his familiarity with German affairs, his knowledge was of benefit to his country at the outbreak of the War, and in 1915 he received the appointment of General Secretary for Foreign Affairs and in 1918, that of Councillor for the affairs of Alsace-Lorraine. He was elected to the French Academy in this same year. He served on the committee that received the German delegates who were to sign the Treaty of Versailles and also on the commission which arranged the Polish corridor. In addition, he was one of the signers for France of the Treaty of Versailles. From 1920 to 1922 he was president of the Council of Ambassadors, which succeeded the Peace Conference.

Although he never wrote of his long diplomatic experiences in the form of memoirs, M. Cambon contributed to many newspapers, including *The New York Times*, *Les Annales*, and *L'Esprit International*. These articles were at various times made into booklets, the last of which appeared in 1931. It was translated into English and published under the title, *Old and New Diplomacy*. Also, he contributed a review of the *Memoirs* of Prince von Bulow to *La Revue des Deux Mondes* in 1931; the article "Security" to the *Encyclopædia Britannica* (14th ed.); and an article, "The Foreign Policy of France" to *Foreign Affairs*, January, 1930. He revised annually, *Le Diplomate*, a handbook used by Foreign Office recruits. He was known as one of the most resourceful, tactful, persuasive, and modest of the diplomats ever in the service of the Third French Republic.

CAMEROON, kām'er-ōon', FRENCH. An autonomous territory, formerly part of the German territory of Kamerun, confirmed as a French mandate by the League of Nations in 1922. Area, 166,489 sq. miles; population (1933), 2,298,495 of whom 2038 were Europeans. Yaoundé, the capital, had 6190 inhabitants. In the 141 schools during 1933 there were 16,089 pupils; in addition there were 5 professional schools and a school for the sons of native chiefs.

Production and Trade. The principal products were groundnuts, cacao, palm oil, almonds, hides,

timber, and ivory. In 1933, imports were valued at 75,263,000 francs; exports, 77,562,000 francs.

Government. The general budget for 1933 indicated 57,291,141 francs for revenue and 54,464,719 francs for expenditure. Government was vested in a commissioner aided by an administrative council. Commissioner in 1935, M. Repiquet.

CAMEROONS, kām'ēr-ōōns', BRITISH. The part of the former German territory of Kamerun in West Africa, confirmed as a British mandate by the League of Nations in 1922. Area, 34,559 sq. miles; population, 781,115. Victoria and Tiko were the two ports of entry.

Production and Trade. Cacao, palm oil, palm kernels, rubber, bananas, timber, and guinea corn were the main products. In 1934, imports of general cargo were valued at £110,069; exports of general cargo, £194,012.

Government. For 1933-34, revenue amounted to £91,336; expenditure, £120,067. The northern part of Cameroons was attached to the Nigerian Provinces of Adamawa, Benne, and Bornu; the southern part, known as Cameroons Province, was attached to the Southern Provinces of Nigeria. Administration was under the governor of Nigeria. See NIGERIA

CAMP FIRE GIRLS OF AMERICA. An organization primarily for the adolescent girl, whose object is to "seek beauty, give service, pursue knowledge, be trustworthy, hold on to health, glorify work, and be happy." It was organized nationally in 1911 and chartered in 1912, with Dr. Luther H. Gulick as president. The purpose of its activities is not the attainment of particular skill in any of the seven crafts, home, health, hand, camp, nature lore, business, and citizenship, but the development, and happiness through development, of the individual girl, who discovers new interests and new talents and at the same time enjoys the companionship of other girls. The membership of the organization in 1934 was 228,744, including 183,804 Camp Fire Girls and Guardians and 44,940 Blue Birds, the youngest members.

Each year the organization promotes a special project, emphasizing different phases of its aims and activities. The theme of the project for 1935 was "My Place in the World," the girls engaging in activities which brought them a realization of their place as citizens at home, in their own towns, in the United States and in the World. They made maps and collections of photographs of their towns and models of certain areas as they are and as they might be improved. They arranged programmes showing the history of their towns and other programmes showing the dependence of nations, one upon the other. The groups of older girls in the larger cities accepted a "Challenge" from Mrs. Franklin D. Roosevelt to find out about the work possibilities and living conditions in their towns. Their reports were read by a committee composed of Mrs. Roosevelt, Dr. Henry Overstreet, head of the Department of Philosophy of the College of the City of New York (and author of "We Move in New Directions" as well as numerous other books), and Lester F. Scott, National Executive of the Camp Fire Girls. The four groups whose work was judged the most outstanding by this committee were given letters of commendation by Mrs. Roosevelt at a little ceremony held at the National office.

The organization publishes *The Guardian*, a programme resource for leaders. The national officers in 1935 were: Mrs. Lida Foote Tarr, president; Miss Florence Hughes, first vice-president;

Dr. Joseph E. Raycroft, second vice-president; Dr. Jay B. Nash, third vice-president; Mr. Edgar Webb, treasurer; and Lester F. Scott, secretary and national executive. National headquarters are at 41 Union Square, New York City.

CANADA. A Dominion of the British Commonwealth comprising nine Provinces and two Territories. Capital, Ottawa.

Area and Population. The land area, the census population of June 1, 1931, and the estimated population on June 1, 1935, are shown by Provinces and Territories in the accompanying table, compiled from the *Canada Year Book, 1934-35*. The fresh water area is about 228,070 square miles, making the total land and water area 3,694,836 sq. miles.

AREA AND POPULATION OF CANADA

Province	Land area, sq miles	Population 1931	1935
Prince Edward Island ..	2,184	88,038	89,000
Nova Scotia	20,743	512,846	527,000
New Brunswick	27,710	408,219	429,000
Quebec	523,534	2,874,255	3,062,000
Ontario	363,282	3,431,683	3,596,000
Manitoba	219,723	700,139	739,000
Saskatchewan	237,975	921,785	978,000
Alberta	248,800	731,605	780,000
British Columbia	359,279	694,261	735,000
Yukon Territory	205,146	4,230	4,000
Northwest Territories	1,258,217	9,723	10,000
Total	3,466,793	10,376,786	10,949,000

The 1931 census showed 5,374,541 males and 5,002,245 females, the excess of 3.59 males over females in each 100 of population being exceeded only in Argentina. Of the 1931 population, 5,381,071 were of British origin (English, 2,741,419; Scottish, 1,346,350; Irish, 1,230,808; other, 62,494) and 2,927,990 of French origin. The population was divided by religious affiliation as follows: Roman Catholics, including 186,654 Greek Catholics, 41.30 per cent; United Church (Methodists, Congregationalists and Presbyterians), 19.44 per cent; Anglicans, 15.76 per cent; Presbyterians (not included in United Church), 8.39 per cent; Baptists, 4.27 per cent; Lutherans, 3.8 per cent; Jews, 1.5 per cent. Populations of the chief cities in 1931 were: Montreal, 818,577; Toronto, 631,207; Vancouver, 246,593; Winnipeg, 218,785; Hamilton, 155,547; Quebec, 130,594; Ottawa, 126,872; Calgary, 83,761; Edmonton, 79,197; London, 71,148; Windsor, 63,108; Verdun, 60,745; Halifax, 59,275; Regina, 53,209; Saint John (N.B.), 47,514; Saskatoon, 43,291. Including suburbs, Montreal had 1,000,157 inhabitants; Toronto, 808,864; Vancouver, 308,340; Winnipeg, 280,202. The so-called Border Cities (Windsor, East Windsor, Walkerville, and Sandwich) were amalgamated in 1935.

Immigrants into Canada during the fiscal year ended Mar. 31, 1935, totaled 12,126, including 2198 from the United Kingdom, 5960 from the United States, and 3978 from other countries. During the same period 7618 Canadian citizens returned from the United States. Live births in 1934 numbered 220,928 (222,868 in 1933); deaths, 101,502 (101,968 in 1933); marriages, 73,074 (63,865 in 1933). The 1934 birth rate per 1000 of population was 20.4. The number of illegitimate births, 8031, was 3.64 per cent of all living births.

Education. The 1931 census revealed an illiteracy rate of 7.8 per cent among the population over five years of age. In 1933 there were 32,708 educational institutions of all kinds, with 2,530,056 pupils and 84,381 teachers and with budget expenditures aggregating \$146,921,862. Ordinary and

technical day schools controlled by the provinces numbered 30,800, with 2,232,622 pupils. There were 1035 privately controlled ordinary day and business training schools, with 102,791 pupils; and 152 institutions of university grade, with 41,175 students; besides various special schools. Educational expenditure of all forms declined from a peak of \$178,700,000 in 1931 to about \$130,000,000 in 1934.

Production. The value of all Canadian production in 1933 was estimated by the Dominion Bureau of Statistics at \$3,375,542,000 gross and \$2,062,311,000 net. The gross production of primary industries was valued at \$1,556,633,000 and the net value was \$1,093,750,000; for secondary industries, the gross value of production was \$2,256,324,000 and the net value \$1,234,468,000. Elimination of duplications account for the fact that the grand total figures are less than the sum of the primary and secondary values. The gross value of primary industries was made up as follows: Agriculture, \$890,164,000; forestry, \$197,325,000; fisheries, \$35,736,000; trapping \$7,258,000; mining, \$264,737,000; and electric power, \$161,411,000. Of the secondary industries, construction accounted for a gross value of \$97,289,000; custom and repair work, \$72,186,000; manufactures, \$2,086,847,000.

The population gainfully employed in 1931 numbered 3,927,591, or 48.1 per cent of the total; of the male working population approximately 34 per cent were engaged in agriculture, 11 per cent in manufacturing, 7.6 per cent in transportation, and 6.2 per cent in building and construction. The *Financial Post*, Toronto, estimated the national income in 1935 at \$4,086,000,000, against \$3,838,000,000 in 1934.

Agriculture. According to the 1931 census, Canada had 163,114,034 acres of occupied farm land and 189,043,156 acres of potential agricultural land were still available for occupation, excluding the Yukon and Northwest Territories. Grain, dairy products, fruit, livestock, and fur are the chief farm products. The gross agricultural wealth of the nation was estimated at \$5,608,157,000 in 1934 (\$5,563,790,000 in 1933). The estimated gross agricultural revenue declined from \$1,631,081,000 in 1929 to \$766,794,000 in 1932 and then increased to \$802,946,000 in 1933 and \$931,347,000 in 1934. Of the total 1934 gross revenue, field crops accounted for \$544,974,000 (\$453,598,000 in 1933); dairy products, \$181,966,000 (\$170,829,000 in 1933); farm animals, \$99,438,000 (\$89,063,000); poultry and eggs, \$44,267,000 (\$38,060,000); fruits and vegetables, \$39,145,000 (\$33,208,000). Other sources of 1934 revenue were: Tobacco, \$7,232,000; furs, \$4,127,000; maple products, \$3,047,000; wool, \$2,645,000; honey, \$2,245,000; clover and grass seed, \$2,010,000; flax fibre, \$250,000. Yields of the leading field crops in 1932, 1933, and 1934, with preliminary returns for 1935, are shown in the accompanying table.

CANADIAN CROP YIELDS, 1932-35

[Units in thousands of bushels, except as indicated]

	1932	1933	1934 ^a	1935 ^a
Wheat	428,514	281,892	275,849	273,971
Oats	391,561	307,478	321,120	416,369
Barley	80,773	63,359	63,742	87,512
Rye	8,938	4,177	5,423	10,610
Buckwheat	8,424	8,483	8,635	7,972
Mixed grains	39,036	33,009	37,926	39,567
Potatoes	39,416 ^b	47,745 ^b	48,095 ^b	38,786 ^b
Hay and clover ...	13,559 ^c	11,443 ^c	11,174 ^c	14,098 ^c

^a Estimates. ^b 1,000 cwt. ^c 1,000 tons

The total estimated value of the principal Canadian field crops in 1935 was \$510,835,600, a figure

\$38,581,000 or 7 per cent below the 1934 estimate but well above any other year since 1930. Estimated values of the individual crops for 1935, with 1934 figures in parentheses, were: Wheat, \$166,693,000 (\$169,631,000); oats, \$98,298,000 (\$103,124,000); barley, \$23,029,000 (\$29,975,000); rye, \$2,746,000 (\$2,662,000); buckwheat, \$4,096,000 (\$4,572,000); mixed grains, \$14,526,000 (\$15,634,000); potatoes, \$29,782,000 (\$23,822,000); hay and clover, \$109,513,000 (\$131,295,000).

The output of milk in 1934 was 16,295,952,700 pounds; butter, 342,965,500 pounds; cheese, 100,765,800 pounds. Maple sugar production in 1935 was 6,538,960 pounds, valued at \$740,145; maple sirup, 2,250,769 gallons, valued at \$2,782,275. Live-stock on farms in 1934 included 2,933,492 horses, 8,951,900 cattle (including 3,864,200 milch cows), 3,421,100 sheep, and 3,654,000 swine. The number of poultry was 59,798,700 (59,324,400 in 1933). The production of furs in 1933-34 was valued at \$12,122,293. On Dec. 31, 1933, the value of fur-bearing animals on fur farms was \$7,509,567, and the value of pelts sold from fur farms in 1933 was \$3,712,443.

Manufacturing. Canada ranks among the leading world producers of automobiles, hydro-electric power, paper, aluminum, and rubber goods. In 1933 there were 25,232 manufacturing establishments, with an aggregate capital of \$4,689,373,704, and a total of 493,903 employees who received salaries and wages amounting to \$465,562,090. The net value of production was \$1,117,659,273, compared with \$1,997,350,365 in 1929. The industrial lines in which the largest amounts of capital were invested in 1933 were as follows: Central electric stations, \$1,386,000,000; wood and paper, \$893,000,000, iron and its products, \$580,000,000; vegetable products, \$509,000,000. The gross value of production of the chief industrial groups for 1933 was Vegetable products, \$421,849,872; wood and paper, \$342,155,077; textile products, \$294,715,248, animal products, \$271,068,210, iron and its products, \$211,961,908; non-ferrous metals, \$164,765,604, non-metallic minerals, \$141,791,451; central electric stations, \$117,532,081. The wood-pulp and paper industry, the most important single manufacturing industry, exports more than 60 per cent of its output to the United States. Production of newsprint in 1935 was 2,753,289 tons, the largest on record; of pig iron, 600,000 long tons, steel, 936,000 tons; motor vehicles, 139,742 passenger cars and 33,253 trucks.

The output of wood pulp in 1933 was 2,979,562 tons, valued at \$64,114,074; paper, 2,419,420 tons, valued at \$97,030,429 (including 2,021,965 tons of newsprint, valued at \$66,959,501). Production of steel ingots and castings in 1934 was 759,070 tons (409,979 in 1933); pig iron, 406,995 tons (227,317 in 1933); ferro-alloys, 33,085 tons (30,133 in 1933); output of electric power, 21,167,000,000 kilowatt hours; automobiles, by value, \$76,133,000 (\$42,885,000 in 1933). The total capacity of hydro-electric turbine installations in Canada at the beginning of 1935 was 7,547,035 horse power, compared with total potential reserves of 43,700,000 horse power. The general index of industrial production (Base: 1929 equals 100) increased from 58.1 for 1932 to 81.3 for 1935, while the index of industrial employment (Base: 1929 equals 100) rose from 72.5 for 1932 to 80.9 for 1934.

Mineral Production. The value of mineral production in 1934 was \$277,492,263, compared with \$221,495,253 in 1933 and with \$310,850,246 in the peak year 1929. The quantity and value of the principal minerals produced in 1934 were as fol-

lows (figures subject to revision): Gold, 2,969,680 fine oz., \$61,388,732 valued at standard rate (estimated exchange equalization on gold produced, \$41,065,228); coal, 13,795,649 tons, \$41,922,253; nickel, 128,687,340 lb., \$32,139,425; copper, 364,890,860 lb., \$26,681,069; zinc, 298,579,581 lb., \$9,087,568; lead, 346,270,062 lb., \$8,436,524; natural gas, 21,948,855 M cu. ft., \$8,419,073; silver, 16,441,361 fine oz., \$7,803,218; asbestos, 155,980 tons, \$4,936,326; platinum, 116,230 fine oz., \$4,490,763; crude petroleum, 1,417,368 bbl., \$3,558,482; salt, 321,753 tons, \$1,954,953. The output of cement was 3,783,226 bbl., valued at \$5,667,946; of sand and gravel, 13,521,257 tons, \$4,387,281; stone, 3,661,800 tons, \$3,801,000; and lime, 367,317 tons, \$2,752,797.

In 1935 mineral production rose to a value of \$308,164,000. The quantity and value of the most important minerals was: Gold, 3,290,664 fine oz., \$68,024,000; coal, 14,108,718 tons, \$42,499,000; nickel, 139,194,348 lb., \$35,450,000; copper, 418,753,148 lb., \$32,322,000; lead, 337,459,472 lb., \$10,620,000; silver, 16,413,482 fine oz., \$10,346,000; zinc, 316,250,769 lb., \$9,825,000.

Forests. The value of woods operations for 1933 was \$93,773,143, compared with \$92,106,252 in 1932 and with \$219,570,129 in 1929. Of the 1933 total, pulpwood production accounted for \$33,213,973; firewood, \$31,141,104; and logs and bolts, \$23,158,381. Forest operations in 1933 involved the cutting of 2,027,713,767 cu ft of standing timber. Canada's forest resources were estimated at 266,844,000,000 cu ft of standing timber, capable of yielding 448,355,000,000 ft. board measure of sawn lumber and 1,521,938,000 cords of pulpwood, ties, poles, and other materials. The 1933 forest operations provided the equivalent of a full year's work for at least 65,000 men.

Fisheries. According to the advance report of the Dominion Bureau of Statistics for 1934, the production of the fisheries had a total value of \$34,121,971 (\$27,558,053 in 1933). Of the 1934 total, the British Columbia fisheries accounted for \$15,334,335, Nova Scotia for \$7,673,865, and New Brunswick for \$3,679,618. The value of the chief commercial fishes caught in 1934 was Salmon, \$12,875,257; lobsters, \$4,269,764; cod, \$3,327,507; herring, \$1,799,967; whitefish, \$1,358,692; halibut, \$1,133,955; haddock, \$1,075,529; and sardines, \$1,039,002. The capital investment of the Canadian fisheries in 1934, including primary operations and the fish canning and curing industries, totaled \$43,377,531 (\$40,914,057 in 1933) and the industry as a whole gave employment to 83,396 persons, or 3848 more than in the previous year.

The catch of the sea fisheries in 1935 totaled 8,149,350 cwt., valued at \$14,594,070 (unrevised figures).

Tourist Trade. Expenditures of foreign tourists in Canada in 1934 were estimated at \$129,974,000 (\$117,124,000 in 1933 and \$309,379,200 in 1929). Canadian tourists abroad spent \$60,905,000 in 1934, against \$50,860,000 in 1933 and \$121,645,000 in 1929. Automobile tourists from the United States spent \$86,259,000 in 1934 (\$77,250,000 in 1933); rail and steamship tourists from the United States, \$34,260,000 (\$32,111,000 in 1933); and overseas tourists, \$9,455,000 (\$7,763,000). A total of 3,261,848 automobiles entered Canada from the United States in 1934, of which 2,373,648 stayed less than 25 hours. Canadian automobile tourists spent \$32,645,000 in the United States (\$24,611,000 in 1933); rail and steamship tourists, \$13,988,000 (\$12,267,000). Canadian tourist expenditures in

overseas countries were \$14,272,000 (\$13,982,000 in 1933).

Foreign Trade. The marked recovery in Canadian foreign trade inaugurated in 1933-34 was continued in the fiscal year ended Mar. 31, 1935, as indicated by the accompanying table.

CANADIAN FOREIGN TRADE, 1929-30 TO 1934-35
[In thousands of Canadian dollars]

Years ended March 31	Total exports	Imports for consumption	Excess Imports (-) Exports (+)
1929-30	1,144,938	1,248,274	-103,336
1930-31	817,028	906,613	-89,585
1931-32	587,566	578,504	+9,062
1932-33	480,714	406,381	+74,330
1933-34	585,654	433,799	+151,856
1934-35	667,559	522,431	+145,128

The United States in 1934-35 was again the chief source of Canadian imports, supplying 58.1 per cent of the total (54.9 per cent in 1933-34), as against 21.4 per cent imported from the United Kingdom (24.2 in 1933-34). The United States also took 34.1 per cent of Canada's 1934-35 exports (33.5 per cent in 1933-34), while the United Kingdom purchased 41.5 per cent (39.3 per cent in 1933-34). Largely as a result of the Hawley-Smoot tariff passed by the United States Congress in 1930 and the Ottawa Agreements reached in 1932 among the members of the British Commonwealth of Nations, the United Kingdom's share in Canadian imports and exports increased substantially, largely at the expense of the United States, during the period 1930-35.

The leading sources of Canadian imports in 1934-35 were (in 1000 Canadian dollars): United States, \$303,640; United Kingdom, \$111,685; Germany, \$10,014; France, \$6444; British India, \$6413; Australia, \$6327. The principal markets for Canada's domestic exports were (in 1000 Canadian dollars): United Kingdom, \$274,183; United States, \$224,698; Australia, \$18,082; Japan, \$16,936; British South Africa, \$12,656; Belgium, \$11,780; the Netherlands, \$10,072; France, \$9842; New Zealand, \$7345; Newfoundland, \$6469. The 10 leading import commodities, by value, were (1000 dollars): Coal, \$35,618; crude petroleum, \$32,501; automobile parts, \$22,178; machinery, \$19,128; raw cotton, \$18,111; iron plates and sheets, \$15,964; raw sugar, \$14,479; spirits and wines, \$14,351; fresh fruits, \$12,586; books and printed matter, \$9034. The chief export commodities, by value, were (1000 dollars): Wheat, \$132,442; newsprint paper, \$82,148; nickel, \$28,423; wood pulp, \$25,869; planks and boards, \$24,901; meats, \$24,115; fish, \$22,411; automobiles, \$19,192; copper bars, rods, etc., \$18,751; wheat flour, \$18,386.

For the calendar year 1935 imports were \$550,315,000 (Canadian currency) and exports were \$729,294,000 (preliminary figures). United States statistics showed general imports from Canada in 1935 of \$286,220,771 (\$231,695,583 in 1934) and exports to Canada (including reexports) of \$323,190,991 (\$302,433,260 in 1934).

Finance. Dominion revenues for the fiscal year ended Mar. 31, 1935, totaled \$361,872,080, of which \$304,443,729 represented tax revenues. Ordinary expenditures were \$354,368,220, not including extraordinary and capital expenditures of \$123,636,679. In 1933-34 revenues were \$324,480,000; ordinary expenditures \$346,649,000; capital expenditures, \$6,490,000; and special expenditures, \$42,787,000. The budget for 1935-36 estimated total revenues at \$392,100,000 and ordinary expenditures at \$370,600,000.

The net public debt on Mar. 31, 1935, was \$2,846,110,958, or \$116,132,817 higher than on Mar. 31, 1934.

Shipping. During the fiscal year ended Mar. 31, 1935, 116,803 vessels of 86,431,178 register tons entered Canadian ports and 117,203 vessels of 85,976,827 register tons cleared in the sea-going, coastwise, and inland international trade. Arrivals included 21,419 sea-going vessels of 28,512,257 register tons and clearances, 21,784 sea-going vessels of 28,547,591 tons. During the 1934 navigation season a total of 24,261 vessels of 17,736,818 register tons passed through the 10 Canadian canals. They carried 69,990 passengers and 18,069,252 tons of freight.

Railways, etc. The single-track mileage of Canadian steam railways on Jan. 1, 1934, totaled 42,338 miles (42,411 miles on Jan. 1, 1933). For the calendar year 1933 the steam railways operating in Canada reported gross earnings from operation of \$270,278,276 and operating expenditures of \$233,133,108. In the same year they carried 19,172,193 passengers (21,099,582 in 1932), and 63,634,893 tons of freight (67,722,105 in 1932). The privately-owned Canadian Pacific Ry., with 21,941 miles of main line, and the government-owned Canadian National Rys, with 17,018 miles of main line, are the two principal systems, controlling over 90 per cent of the total mileage. From its organization in 1923 to the end of 1934 the Canadian National system accumulated a deficit of \$1,132,067,130, including loans and accrued interest. Railway carloadings in 1935 totaled 2,351,393 against 2,320,050 in 1934. The Canadian National and Canadian Pacific lines showed a gain of about 2 per cent in gross operating revenues over 1934.

The highway mileage on Jan. 1, 1934, totaled 409,124, of which 3033 miles were concrete, 4837 miles macadam, 86,693 miles gravel, and 175,769 miles improved earth. The number of air-mail routes in regular operation increased from 17 to 20 during 1934. A Trans-Canada airway, with complete equipment, including night lighting on 108 intermediate airports, was under construction in 1935.

Government. Executive power is exercised in the King's name by the Governor-General of Canada, acting through a responsible ministry. Legislative power rests in a parliament of two houses—a Senate of 96 members appointed for life by the Governor-General on advice of the Cabinet and a House of Commons of 245 members elected for five years (unless the government is sooner dissolved) by popular male and female suffrage. The nine Provinces enjoy a large measure of local autonomy, there being a separate parliament and administration for each. A lieutenant-governor appointed by the Governor-General-in-Council heads each provincial executive. Governor-General in 1935, John Buchan (Lord Tweedsmuir of Elsfield), appointed Mar. 27, 1935, to succeed the Earl of Bessborough. For the 1935 general election, see under *History*.

HISTORY

Political Developments. January of 1935 found the electoral battle to determine the fate of Prime Minister Richard B. Bennett's Conservative government in full swing. The waning prestige of the Conservative party, which had been in control since 1930, had been clearly demonstrated during 1933 and 1934 by repeated Liberal victories in local and provincial elections. The Liberals, overwhelmed by the Conservative landslide of

1930, had regained control of British Columbia and Nova Scotia in 1933 and of Ontario and Saskatchewan in 1934. Confident that his party would be swept back into office on the mounting wave of anti-Conservatism, the astute leader of the Liberals, W. L. Mackenzie King, made little effort to put forward a positive programme for the solution of Canada's problems.

In addition to the usual hostility accruing to depression governments, Mackenzie King counted upon the split within the Conservative ranks in 1934 to complete their destruction at the polls. Harry H. Stevens, Minister of Trade and Commerce, had resigned from the Bennett Cabinet Oct. 27, 1934, as a result of the antagonism aroused among his colleagues by his sensational disclosures as chairman of a parliamentary committee investigating price spreads and business practices (see 1934 NEW INTERNATIONAL YEAR BOOK, p. 117). Mr. Stevens had apparently won the support of a strong element in the Conservative party by his demand for government action to curb the exploitation of the consuming public, the producers, and the workers by "unscrupulous financiers and business men." Moreover, the economic upswing produced in 1933 by the Bennett policies of cheap money and farm subsidies had slowed down considerably in 1934. The Conservatives' high tariff, under which clearly uneconomic industries had arisen in Canada at the expense of the consumers, was a strong factor in the resurgence of the traditionally low-tariff Liberals.

Convinced that radical measures offered the only hope of forestalling crushing defeat, Prime Minister Bennett in a series of radio addresses early in January completely abandoned orthodox Conservative policies and proposed sweeping governmental control and regulation of the economic system. He declared there could be no permanent economic recovery without the reform of capitalism. His programme, resembling in many respects that of the New Deal in the United States, called for minimum-wage and maximum-hour regulations; insurance against unemployment, sickness, accident, and old age; higher taxes on unearned incomes; regulation of the stock exchanges; additional aid to farmers through marketing schemes; a national economic council; control of currency and credit for social ends; and a readjustment of the debt structure. He also proposed the conclusion of a reciprocity treaty with the United States to reduce tariffs and early ratification of the St. Lawrence waterway project to provide additional work for the unemployed. Most of these measures were introduced in Parliament when the session opened on January 17, and many of them were adopted before Parliament was prorogued on July 5 (see *Legislation*).

When the Prime Minister's reform bills were examined they proved to be relatively moderate, middle-of-the-road proposals. They did not go far enough to satisfy the demands of Canadian radicalism, as formulated by the socialist Cooperative Commonwealth Federation, the Social Credit movement in Alberta, or even Mr. Stevens and his adherents. On the other hand Mr. Bennett's "new deal" badly frightened and antagonized a powerful element in his own party. Such powerful Conservative organs as the *Montreal Gazette* and *Financial Post* deserted the party and threw in their lot with the Liberals. At the same time, the Liberals, startled out of their complacency, attacked the Bennett programme as an insincere effort to re-

gain lost popularity. They raised the cry of Fascist regimentation of private business.

The Bennett programme encountered another obstacle in the Canadian Constitution, provisions of which guaranteed the Provinces such extensive autonomous powers as to render any far-reaching Federal social and economic legislation of dubious legality. The Prime Minister attempted to sidestep the constitutional problem by asserting that the entrance of Canada into the League of Nations and the International Labor Office had made labor and social conditions subject to treaty observance and consequently a matter for Federal consideration. But the constitutional issue remained in the foreground, causing dissension within the Cabinet and resulting in the modification of a number of the government measures. The Liberals contended that the reform legislation was futile since it would be overturned in the courts. On February 12 a special Parliamentary committee was established to study the problem and recommend constitutional changes.

As the year advanced, various developments lent both interest and complexity to the political campaign. The final report of the Price Spreads (Stevens) Commission, preliminary reports of which had caused a major sensation, was published on April 12. The majority report proposed the establishment of a Federal Trade and Industry Commission to control and regulate domestic trade. Other recommendations called for changes in the company law, putting managers and directors in a trustee capacity with respect to security holders; a 44-hour week; minimum wage laws for male workers and uniform enforcement of provincial minimum wage laws; collective bargaining; centralized government control of marketing and grading; penalties for false advertising, and amendment of the Weights and Measures Act. The commission reported that free competition was absent in a large proportion of the businesses investigated. Monopolistic trends both in production and distribution had enabled a relatively small group of financiers and business men to maintain or increase their profits during a period when returns to labor, primary producers, and independent distributors had fallen rapidly. The commission also pointed out how tariffs served to restrict competition in many lines. Legislation embodying the above recommendations was immediately introduced.

The annual budget speech of March 23 provided for few changes. A surtax and a gift tax were added to existing individual income taxes. The corporation income tax was raised from 12½ to 13½ per cent. To check bootlegging and smuggling, excise and customs levies on spirits were cut \$3 a gallon. The gold tax was abandoned in favor of a special income tax on owners and stockholders of gold mines. The tariff proposals of the budget speech, placed in effect early in June, made some concessions to British manufacturers who complained of their inability to compete in the Canadian market.

The burden of unemployment relief continued to strain provincial and municipal budgets to the utmost, the cost totaling about \$100,000,000 annually. A conference of 79 mayors held in Montreal on March 25 attempted to force the Dominion to assume complete responsibility for relief, but the Federal Government replied that its hands were tied by the Constitution. During the summer a number of provincial and municipal governments reduced their contributions to the unemployed and in some cases removed all able-bodied single men

from the relief rolls in order to force them into the harvest fields. These moves mollified taxpayers somewhat but stimulated further unrest among the unemployed. During June and July discontent among unemployed single men in Federally-administered camps in the Western Provinces led to a march on Ottawa. The movement, starting in British Columbia, gathered momentum as some 700 men from the camps traveled east by freight train to demand work at prevailing wages in place of the 20 cents a day pocket money provided them in addition to their keep. Prime Minister Bennett refused to meet the demands, which he declared seditious and inspired by communism. The march was broken up by Royal Canadian Mounted Police at Regina, Sask., and its vicinity after severe rioting in which one policeman was killed and 100 persons injured, two of them mortally. This harshness aroused much criticism of the Bennett Government from local and provincial authorities, as well as among the voters generally. Hoping to capitalize on mounting discontent, ex-Minister Stevens on July 7 announced the formation of a new Reconstruction party which actively entered the political campaign.

Meanwhile public credit had been impaired to some degree by the inability of some municipalities and Provinces to meet relief burdens in addition to their normal obligations. In some cities such as Vancouver, B. C., there were threats to go into bankruptcy unless interest rates on municipal bonds were reduced. In Ontario the Liberal Government under Premier Mitchell F. Hepburn made a frontal attack upon the banking and utility interests by canceling power contracts made by the Ontario Hydro-Electric Power Commission with four private power companies. The Liberals charged that the previous Conservative administrations had attempted to sabotage the publicly-owned Hydro-Electric Power Commission by purchasing power from private utilities in Quebec at a higher cost than the production cost in the Hydro's own plants. In retaliation the bankers refused to bid on a \$15,000,000 provincial bond issue offered on June 12. Premier Hepburn, raising the interest rate slightly and shortening the term, offered a \$20,000,000 loan direct to the public. Much to the chagrin of the bankers, it was oversubscribed.

The cumulative effect of the mounting dissatisfaction with the Bennett Government was demonstrated by the results of three provincial elections held during the summer. In the New Brunswick election on June 27 the entire Conservative cabinet was defeated and the Liberals captured all except five of the 48 seats in the Legislature. The Liberal victory in Prince Edward Island on July 23 was even more sweeping, the Conservatives losing all 16 seats which they had previously held in a Legislature of 30 members. Then followed on August 22 the sensational victory of the Social Credit party in Alberta, which overwhelmed the government (United Farmers) party and left the Conservatives only two seats out of the six they previously held. The Liberals also fared badly in Alberta, losing six of their 11 seats. William Aberhart, leader of the Social Credit party, formed a new cabinet. No member of the cabinet or of the Social Credit representation in the Legislature had ever sat in a legislative assembly before.

The Social Credit victory in Alberta, followed by its rapid spread into adjacent Provinces, aroused much concern among Conservatives in general and the two major political parties in particular. Aberhart, the social credit apostle, was principal of a

Calgary high school and director of the Prophetic Bible Institute in the same city. He won the election by guaranteeing every adult citizen a regular income of \$25 monthly. Funds were to be raised by a turnover tax of about 10 per cent on domestic products. The Social Credit triumph dealt another blow to Dominion as well as to Alberta's credit. The provincial bonds declined rapidly in value and large-scale withdrawals by holders of provincial savings certificates forced the government to suspend their redemption on August 29. Premier Aberhart also discovered that before he could even consider putting his scheme into operation, the Province was obliged to raise \$12,000,000 to meet existing pressing obligations. He therefore announced that it would require a year or two of preparation before his Social Credit plan could go into effect. To tide him over until after the Dominion general election, Prime Minister Bennett advanced Aberhart a loan of \$2,500,000 from the national Treasury. Meanwhile, the Prime Minister on August 14 had secured the dissolution of Parliament and called a general election for October 14. As the electoral campaign drew to a close, Mr. Bennett attempted to save his party's cause by increasingly alluring promises to discontented elements among the voters. But it was all in vain.

The General Election. On October 14 the Bennett Government was swept out of office by a Liberal landslide which gave the new government formed by Mackenzie King the largest majority any party had ever held in Parliament. Out of 245 seats in Parliament, the Liberals captured 171 and 8 additional seats were held by independent Liberals who could normally be expected to support the Liberal programme. The standing of the Opposition parties was: Conservatives, 40; Social Credit party, 17; Cooperative Commonwealth Federation, 7; Reconstruction party, 1; United Farmers of Ontario, 1.

The Liberals carried every Province except Alberta and British Columbia. But it was the drift of voters to third parties rather than a great increase in Liberal voting power that decided the election. The Liberal vote increased to 1,877,460 in 1935 from 1,714,860 in 1930, while the Conservative vote fell to 1,222,250, against 1,909,955 received in 1930. The vote for the various other parties in the field was 922,857, against 274,180 in 1930. The Reconstruction party polled 373,479 votes but elected only its leader, Harry Stevens, to Parliament. The Cooperative Commonwealth Federation polled 337,832 votes; Social Credit party, 137,493, Communists, 29,498; Labor, 14,666, Anti-Communists, 3890. The total number of votes cast was 4,022,567, compared with 3,898,995 in 1930. The Reconstruction and Social Credit parties entered the Dominion elections for the first time in 1935. The C.C.F. represented a fusion of the former United Farmers, Labor, and Socialist groups.

William Lyon Mackenzie King became Prime Minister of Canada for the third time on October 23 when his cabinet was sworn in. In addition to the premiership, he held the External Affairs portfolio. Other cabinet members were: Mines, Immigration and Colonization, Interior and Indian Affairs, Thomas A. Crerar, Winnipeg; Justice, Ernest Lapointe, Quebec; Public Works, P. J. A. Cardin, Sorel, Que.; Finance, Charles A. Dunning, Montreal; Postmaster-General, J. C. Elliott, London, Ont.; Trade and Commerce, W. D. Euler, Kitchener, Ont.; Secretary of State, Fernand Rinfret, Montreal; National Defense, Ian Mackenzie, Vancouver; Pensions, and National

Health, C. G. Power, Quebec; National Revenue, J. L. Ilsley, Kentville, N. S.; Fisheries, J. E. Michaud, Edmondston, N. B.; Labor, Norman Rogers, Kingston, Ont.; Railways and Canals, and Minister of Marine, Clarence D. Howe, Port Arthur, Ont.; Agriculture, James G. Gardiner, Sask.; Minister without Portfolio, Sen. Raoul Dandurand, Montreal.

The Liberals in Action. The first action of Prime Minister King was to call a meeting of the Provincial Premiers to discuss the relief and unemployment problem and the allied problem of constitutional revision. At the same time he announced that the Supreme Court of Canada would be asked to rule on the validity of the Bennett labor and social security legislation before the Liberal policy was definitely formulated. The Prime Minister also established a central board of control for the Canadian harbors, thus eliminating seven three-man political commissions. The Liberals also prepared, in line with their campaign promises, to reduce tariffs to the 1930 level. The preferential tariff system established under the Ottawa agreements in 1932 was to be maintained in general, but with reductions on British rates rather than by increases on tariffs on foreign goods. The government was also committed to maintenance of the government-owned Canadian National Railways to assure competitive rates with the privately-owned Canadian Pacific, nationalization of the Bank of Canada; creation of an investment control board in order to improve private corporate finance; and the elimination of public and private price control and of other regulatory legislation restricting domestic trade.

During the electoral campaign the Liberals had attacked the Conservative Government for its failure to negotiate a reciprocal trade agreement with the United States, and Mr. King had promised, if elected, to conclude such a treaty within 90 days. On November 15, a month and a day after the general election, the Prime Minister signed the promised treaty in Washington, following direct negotiations with President Roosevelt and Secretary of State Hull on November 9. By a personal visit to Washington, Mr. King reached an agreement on points which had prevented the successful conclusion of the negotiations initiated in 1934 by the Bennett Government. At the signing of the treaty, President Roosevelt declared that it placed Canadian-American trade relations on a basis of mutual agreement for the first time since 1866. Hopes were high in both Ottawa and Washington that the treaty would permit the restoration of the mutually profitable trade which aggregated nearly \$1,400,000,000 in 1928-29 and declined to about \$525,000,000 in 1934-35.

The comprehensive character of the reciprocal agreement, which President Roosevelt predicted would double trade between the two countries in two years, became evident when the text was made public November 17. The treaty granted Canada lower rates or other concessions on two-thirds of its exports by volume to the United States. The United States in return obtained concessions on three-fourths of her dutiable exports to Canada. The major American concessions to Canada, as summarized in the *New York Times*, fell into the following four groups:

First, the binding on the free list of Canadian exports to the United States which were already free of duty.

Second, reductions in duty, but for specified quantities, of cattle, calves, dairy cows, cream, certified seed potatoes, and certain lumber and timber.

Third, reductions in duty on some kinds of lumber,

cheddar cheese, turnips, apples, hay, maple sugar, live poultry, horses, some fish, and some leather goods

Fourth, the binding against increase of the existing 10 per cent duty on certain feedstuffs for animals

The Canadian concessions to the United States likewise were divided into four categories, as follows.

First, direct duty reductions on 180 items, which accounted for \$175,000,000 out of \$523,000,000 of dutiable imports from the United States during the fiscal year 1929-30.

Second, reductions on all other commodities to the lowest existing or future rates paid by non-British countries.

Third, a guarantee from Canada in a formal diplomatic note attached to the agreement that she would grant a measure of relief from arbitrary import valuations previously applied to many commodities.

Fourth, guarantee of benefits to commercial travelers and transit trade passing through the United States and promised legislation exempting limited purchases of tourists from duty.

Among the major concessions granted Canada by the United States were reductions of \$2.50 to \$5 a gallon on whiskies aged four years or more in wood. Pulpwood, wood pulp, newsprint, shingles and laths, certain fishery products and furs, certain fertilizers, and crude asbestos were bound to the free list.

Canada granted widespread reductions on agricultural products, including fresh fruits, vegetables, and wheat. Potatoes, raw cotton, magazines and periodicals, oranges during part of the year, and tractors were placed on the free list. Other substantial reductions were granted on American machinery, industrial equipment, automobiles and parts, railway cars and parts, electrical apparatus, iron and steel mill products, gasoline, lubricating oils and grease, cotton fabrics, and dressed furs.

The early conclusion of the reciprocity treaty with the United States represented a distinct triumph for Prime Minister Mackenzie King, and it won wide approval in Canada. However, if the Liberals had hoped from this auspicious beginning to enjoy more peaceful and prosperous conditions during their term of office than had their Conservative predecessors, they were rudely awakened by the results of the provincial election in Quebec on November 25. In Quebec the Liberals headed by Premier L. A. Taschereau had retained control of the Legislature by handsome majorities since 1897. In the November 25 election their majority of 66 was reduced to six. While the Conservatives gained some ground, the Liberal losses were due chiefly to the appearance of the new party known as the Action Libérale Nationale, headed by J. Oscar Drouin. In the new Legislature the 90 seats were distributed as follows: Liberals, 48; Action Libérale Nationale, 26; Conservatives, 16.

In accordance with Premier Mackenzie King's promises, a conference was held at Ottawa during December among the leaders of the Dominion and Provincial governments to discuss legislative and financial problems. It was decided to increase relief grants from the Federal treasury and to establish a Dominion Employment Commission to coordinate relief administration. The conference recognized that amendment of the British North America Act to give the Dominion government greater control over nation-wide economic and social affairs was "imperative." It authorized Minister of Justice Lapointe to name a drafting committee to prepare amendments for consideration by another Conference of Canadian Governments, to be held at an early date. Another committee was appointed to discuss debt refunding, duplicative taxes, and measures to secure a more definite allocation of Provincial and Federal taxation fields. Other committees were to seek uniformity in Provincial com-

pany laws and Provincial control of highway transportation. Mining taxation, national highways, and the promotion of the tourist trade also were discussed. A committee was named to take up agricultural marketing problems after the Supreme Court of Canada decided on the constitutionality of the existing Natural Products Marketing Act.

Legislation. The most important legislation enacted by Parliament previous to its adjournment on July 5 may be summarized as follows:

The Wheat Board Act, establishing a board to buy wheat from producers at a fixed minimum price, with the guarantee of a *pro rata* share of the net marketing profits. The government was to absorb the loss if the Board failed to sell the wheat at a profit over the fixed minimum. The Board also took over for sale some 228,000,000 bu. of wheat acquired by the government through earlier price stabilization efforts. The Board commenced operations on September 1 and fixed minimum prices for practically all grades of wheat for the 1935-36 crop year.

An act providing for a Dominion Trade and Industry Commission to take over from the Department of Labor the administration of the Combines Investigation Act, which prohibited monopolies operating to the detriment of the public. The commission was charged with the enforcement of legal commodity standards and with the protection of consumers generally. It began to function Oct. 1, 1935.

Changes in the Criminal Code made it an indictable offense to discriminate between purchasers by granting dissimilar discounts, rebates or allowances, to sell goods in one part of Canada at lower prices than in another for the purpose of destroying competition, or to sell at unreasonably low prices with the same object in view. It was made illegal to employ persons at less than the minimum wage fixed by any law of Canada and to employ child labor. Penalties were imposed for false and misleading advertising.

Amendments to the Weights and Measures Act, effective June 28, which assured the consumers further protection.

The Fair Wages and Hours of Labor Act, guaranteeing fair wages to persons employed on public works and limiting the hours to 8 per day and 44 per week.

The Employment and Social Insurance Act, providing for contributory unemployment insurance for workers receiving less than \$2000 a year, with certain occupations excepted. Equal premiums were to be paid into the insurance fund by employers and employees, the Federal Government contributing 20 per cent of the aggregate premiums and defraying the cost of administration. An Employment and Social Insurance Commission was appointed to administer the act.

The Minimum Wage Act authorizing the establishment of a Federal agency to fix minimum wages in manufacturing and commerce. Its application was restricted to occupations where "no arrangements exist for the effective regulation of wages by collective agreement or otherwise and (where) wages are exceptionally low."

The Limitation of Hours of Work Act, providing for an 8-hour day and 48-hour week for industrial workers.

The Weekly Day of Rest Act, stipulating that industrial workers shall have a rest of at least 24 consecutive hours in every seven days, preferably on Sunday.

Amendments to the Companies Act 1934, establishing further safeguards for the investing public.

Amendments to the Live Stock and Live Stock Products Act, placing private packing-house yards under the Federal regulations applying to public stockyards.

The Fruit, Vegetables, and Honey Act, providing for government inspection and grading of cannery products shipped outside of the Province in which they originate.

Amendments to the Natural Products Marketing Act, extending the operation of the measure to certain forest products designated by the government and providing for "equalization of returns" from the sale of a regulated product.

A Housing Act, making \$10,000,000 of Federal funds available for small dwelling construction and encouraging private lending agencies to provide mortgage funds.

An act establishing an Economic Council to advise the government on social and economic problems referred to it by the Prime Minister.

The rise in world wheat prices resulting from crop shortages and the Italo-Ethiopian war enabled the Wheat Board to dispose of the large wheat surplus accumulated by the Dominion Government without the heavy losses which had been anticipated during the first part of 1935. The Bank of Canada Act, adopted by Parliament in 1934, became effective on Mar. 11, 1935, when the Bank of Canada opened its doors. This privately-owned but government-supervised institution served as a

central bank, its chief function being supervision of the credit policy of the country. Its notes became legal tender within the Dominion and it also functioned as the medium for international exchange operations, with membership in the Bank for International Settlements.

Empire and Foreign Relations. The major event of the year in Canada's external relations was the conclusion of the reciprocity treaty with the United States. The famous *I'm Alone* case, involving an American rumrunner under Canadian registry which was sunk by an American revenue cutter on the high seas in March, 1929, was settled on Jan. 9, 1935. The decision of the commission composed of one Canadian and one American judge named to adjudicate the issue called upon the United States to acknowledge the illegality of the sinking. An apology to Canada and the payment by the United States of \$25,000 to the Canadian Government and \$25,666.50 to the master and crew of the rumrunning ship were also stipulated. The owners of the boat, who were almost all Americans, received no compensation.

A trade war with Japan developed during the year after the Bennett Government had put into effect trade regulations, and particularly exchange equalization provisions, which adversely affected Japanese exports to Canada. Japan in retaliation levied a discriminatory surtax of 50 per cent *ad valorem* on certain Canadian goods. The result was a considerable diversion of Japanese purchases, particularly of wood products, from Canada to the United States. The Canadian Cabinet then imposed a 33½ per cent surtax on all goods imported into Canada from Japan and gave notice that the Anglo-Japanese Trade Treaty of 1913 would be denounced by Canada if the Japanese surtax were not withdrawn. Upon Mackenzie King's return as Prime Minister, he gave notice that his government was prepared to reach an amicable settlement with Japan. An agreement was reached in December and the retaliatory surtaxes were withdrawn by both countries effective Jan. 1, 1936.

The Bennett Government also protested vigorously against provisions of a large timber-purchase agreement signed by British importers early in 1935 with the Soviet wood trust. Canada claimed that the agreement violated Article 21 of the Ottawa Agreements. The British Board of Trade refused to intervene, however. This minor difference did not serve to weaken Canada's support of the British position with respect to the application of League sanctions against Italy. In connection with the application of more rigid economic sanctions against Italy under the Order-in-Council of November 16, steps were taken to guard against the shipment into Canada of camouflaged Italian goods from the United States. The Order-in-Council banned all imports from Italy, prohibited the export to Italy of key materials, such as nickel and copper, used in military operations, and barred the extension of loans and credits.

Plans for experimental flights in 1936 over the projected Ireland-Newfoundland-Canada route preliminary to the establishment of a permanent transatlantic air service in 1937 were laid at conferences held during December in Canada and then at Washington. The agreement envisaged American-British coöperation in operating both the transatlantic and transpacific services. Representatives of the Canadian, American, Irish Free State, and British governments participated in the discussions.

Consult John W. Dafoe, *Canada, An American*

Nation (New York, 1935); H. A. Innis and A. F. W. Plumptre, editors, *The Canadian Economy and Its Problems* (Toronto, 1934).

CANADA, THE UNITED CHURCH OF. The designation applied to the single body formed by the union in 1925 of the Congregational, Methodist, and Presbyterian churches in Canada; the Methodist churches of Newfoundland and Bermuda are also included. Foreign mission work is carried on in Japan, Korea, China, India, Trinidad, and Angola (West Central Africa). In 1934 there were in Canada, Newfoundland, and Bermuda 7226 preaching places (including home missions) in 2886 pastoral charges, 688,099 communicant members, and 1,667,539 persons under pastoral care. At the sixth general council held in Kingston, Ont., in September, 1934, the Rev. Richard Roberts, D.D., was chosen moderator for the ensuing biennium. Headquarters were at 421 Wesley Building, Toronto, Ont.

CANALS. The completion of the Madden Dam adds additional water supply for the Panama Canal, and, during the year, a five-year programme for repairing the great lock gates at Panama—a difficult job which has made good the wear of 20 years of service—has also been brought to completion.

Probably the outstanding work of the year has been the rapid progress made under the U. S. Army Engineers in the canalization of the upper Mississippi. General Lytle Brown, former Chief of Engineers, U.S.A., presented two important papers in *Civil Engineering* (Am. Soc. C. E., N. Y.) summarizing "Waterways Improvements in the United States" (Oct.) and "Federal River and Harbor Policies" (Aug.).

The late President Coolidge once stated that "our whole century-old policy of developing navigable streams at tremendous cost is either a piece of inconceivable and colossal folly, or else we as a people have been inexcusably remiss in taking advantage of our opportunities." General Brown points out the importance of the great Mississippi River drainage and of its rich resources in coal, oil, and as one of the world's greatest work shops. The Mississippi River problem is now tied up with flood protection rather than navigation. The Ohio River work, first systematically undertaken in 1907, was completed in 1929. Now Army engineers are engaged in providing a similar 9 ft. channel depth on the upper Mississippi, from its junction with the Ohio to the Twin Cities—St. Paul and Minneapolis. Similarly, the Missouri, from its mouth above St. Louis across the State of Missouri, and along the western boundary of Iowa to Sioux City, is under improvement.

These are major problems, involving huge dam and lock constructions which require great engineering skill in design and construction. The technical press has given great attention to the remarkable dam constructions on the upper Mississippi during the past two years, and the Ft. Peck dam (see DAMS) is supposed to be an essential element of the Missouri improvement. The Brandon Road Dam and Lock, near Joliet, Ill., is another element in the upper Mississippi work—a feature of the Plaines River development.

Congress has, however, apparently been satisfied to go ahead with all these vast and costly works without attempting to answer President Coolidge's statement quoted above "To-day," as General Brown observes, "the policy on rivers and harbors is entirely in the hands of Congress." In short, the Army Engineers act simply as the agents of

Congress in carrying out these great works Congress, in turn, appears to pay no attention to the fact that river and canal navigation in the United States seems to be a thing of the past, and has gone ahead appropriating huge sums for magnificent works which, unfortunately, however, serve no useful purpose.

Florida Canal. Work has continued on this project which will make it unnecessary for ships to go around the Florida Keys in order to pass from the Atlantic Ocean to the Gulf of Mexico. Two points of particular interest have developed. The water supply of this area of Florida is drawn from ground water and it has been suggested that a salt water canal will lead to serious difficulties because of the inevitable introduction of salt water into the ground water supply. Although there is some difference of opinion, a special report on this subject indicates that possible interference of this kind will be quite limited in its extent. The second point is one which was raised in the promotion stage of the enterprise, namely the economic value of this work. Many loose statements have been made as to possible savings in operating costs for coastwise shipping but, so far as is known, no attempt has been made to study, in a careful and unbiased manner, the probable volume of traffic which will use this new and costly canal. Apparently, economic justification has been assumed. Actually the work, in all probability, should be classed as a relief measure rather than as a justifiable expenditure which will result in tangible economic benefits comparable in value to the sums to be expended for the work.

CANARY ISLANDS. An archipelago off the northwest coast of Africa, belonging to and administered as a part of Spain. Total area, 2807 sq miles, population (Jan 1, 1934), 584,879. The main towns were Santa Cruz de Tenerife (capital), 65,027 inhabitants, and Las Palmas, 81,858.

Fernández Diez, acting governor and president of the Audiencia Territorial at Santa Cruz de Tenerife, was assassinated in the streets of the capital on Oct. 10, 1935. Police attributed the deed to syndicalist terrorists who were said to have maintained a reign of terror throughout the province. See SPAIN.

CANCER. See BIOCHEMISTRY.

CAPE COLONY. See CAPE OF GOOD HOPE.

CAPE OF GOOD HOPE. A province of the Union of South Africa. Area (including Walvis Bay, 430 sq m.), 277,169 sq miles. The estimated mean population on June 30, 1934, was 3,229,900 and included 775,200 of European origin, 1,901,100 Bantus, 8100 Asiatics, and 545,500 mixed, and other races. Capetown, the capital, had 270,459 inhabitants (including 150,914 Europeans) in 1931. On Nov. 6, 1934, there were 2331 European schools with 150,852 students, and 2472 non-European schools with 249,512 students.

Production. The output (from European farms only) of the main field crops for 1933-34 (in short tons) was wheat, 306,432; maize, 153,737; potatoes, 41,424; barley, 25,244; rye, 20,658; kaffir corn, 6011; tobacco, 1876. Wool and mohair were important products. Livestock in the Province (1933) - 26,600,000 sheep, 5,143,000 goats; (1930, latest figures available) - 3,416,840 cattle, 442,189 pigs, 353,108 horses, 306,998 asses, and 88,834 mules. Mineral production (1933): diamonds, 118,549 metric carats valued at £776,622; asbestos, 3225 tons, £60,306; manganese, 31,051 tons, £20,970.

Government. For 1933-34, total revenue (including £2,681,157 received as a subsidy from the

Union government) amounted to £4,833,745; total ordinary expenditure was £4,613,992. Government was vested in an administrator assisted by an executive committee of 4 members, and a provincial council of 61 members elected for 3 years. The Province elects 8 members to the Senate and 61 members to the House of Assembly of the Union Parliament. Administrator in 1935, J. H. Conradie.

CAPE VERDE (vúrd) ISLANDS. A Portuguese dependency 320 miles west of French West Africa, divided into the Windward (São Vicente, Santo Antão, São Nicolau, Santa Luzia, Sal, Boavista, Branco, and Raso) and Leeward (Santiago, Maio, Fogo, Brava, Rei, and Rombo) groups of islands. Area, 1557 sq. miles; population, 150,553. Chief towns: Praia, the capital on the island of Santiago, 4000 inhabitants; Mindello (Porto Grande), a transatlantic coaling station on the island of São Vicente, 9000.

Production and Trade. Sisal, castor oil, mustard, brandy, coffee, hides, and oranges were the main products. In 1932, imports were valued at 64,959,522 escudos; exports, 1,728,934 escudos (escudo averaged \$0.032 for 1932).

Government. For 1933-34, revenue was valued at 20,927,570 escudos; expenditure, 20,715,050 escudos. By a decree of May 9, 1935, the fiscal year for future budgets was changed to agree with the calendar year and the budget expenditure of 18,747,827 paper escudos for the 18 months ending Dec. 31, 1936, was approved. The dependency was administered by a governor.

CARDUCCI CENTENARY. See ITALIAN LITERATURE.

CARINTHIA. See AUSTRIA.

CARLETON COLLEGE. A coeducational college of liberal arts in Northfield, Minn., founded in 1866. The enrollment for the autumn of 1935 was 745. There were 69 faculty members. The endowment amounted to \$2,870,779, and the total income for the year was \$419,698. The library contained 110,000 volumes and 31,500 pamphlets. President, Donald John Cowling, Ph.D., D.D., LL.D.

CARNEGIE CENTENNIAL. See LIBRARY PROGRESS.

CARNEGIE CORPORATION OF NEW YORK. Established by Andrew Carnegie in 1911, this corporation was formed for the advancement and diffusion of knowledge and understanding among the people of the United States, Canada, and the British colonies. Its total endowment is approximately \$135,000,000, of which \$10,000,000 is applicable elsewhere than in the United States.

In 1935, as in the previous year, approximately two-thirds of the annual income of the corporation was devoted to a reduction of unpaid obligations, which on September 30 amounted to \$16,271,602.15. The annual report of the president, Frederick P. Keppel, showed that during the fiscal year 1934-35 the sum of \$3,598,700 was appropriated. Of this amount \$406,450 was applied toward library service; \$372,500 toward the encouragement of adult education activities; \$852,550 toward the support of national organizations in the field of fine arts and of departments of art in colleges and universities and of projects for developing appreciation of the arts; \$692,400 toward the support of educational and scientific studies and research publications; and \$1,274,800 toward general interests, including the Carnegie Endowment for International Peace.

The trustees of the corporation elected for 1935 were: Thomas S. Arbutnot, Newton D. Baker, Nicholas Murray Butler, Samuel Harden Church,

Robert A. Franks, Henry James, Walter A. Jessup, Frederick P. Keppel, Russell Leffingwell, John C. Merriam, Margaret Carnegie Miller, Arthur W. Page, and Elihu Root. Officers of administration were: Elihu Root, chairman of the board; Frederick P. Keppel, president; and Robert M. Lester, secretary. Headquarters are at 522 Fifth Avenue, New York City.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, THE

A foundation established in 1905 by Andrew Carnegie, who placed an endowment of \$10,000,000 in trust for the purpose of encouraging higher education in the United States, Canada, and Newfoundland. Following its incorporation by Congress in 1906, its resources were increased by a further gift of \$5,000,000 from Mr. Carnegie in 1908 and by appropriations of \$1,250,000 in 1913 and \$12,000,000 in 1918 from the Carnegie Corporation of New York. On June 30, 1935, its endowments and accumulated reserves amounted to \$30,807,044, while it had distributed \$28,976,866 in retiring allowances and pensions to 1553 college teachers and 775 teachers' widows, chiefly through 95 associated institutions selected for their educational standing.

The foundation publishes extensive annual reports, which deal with many phases of the educational process. In 1935 it was engaged upon various studies concerning higher education in the United States, professional education, and the relations between secondary and higher education in Pennsylvania. Dr. Walter A. Jessup is president, Dr. Henry Smith Pritchett, president emeritus, and Howard J. Savage, secretary. Headquarters are at 522 Fifth Avenue, New York City.

CARNEGIE INSTITUTE OF TECHNOLOGY.

A nonsectarian institution for technical education at Schenley Park, Pittsburgh, Pa., founded in 1900. The enrollment for the autumn of 1935 was 4794, including 2206 registered in the regular day courses and 2588 in the evening courses. For the summer session 708 students were enrolled. The faculty numbered 354. The endowment amounted to \$16,383,000, and the annual income was \$840,000 (not including student fees). The institute is adjacent to the Carnegie Library of Pittsburgh, which has 450,600 volumes.

CARNEGIE INSTITUTION OF WASHINGTON.

An organization founded in 1902 by Andrew Carnegie "to encourage in the broadest and most liberal manner investigation, research, and discovery and the application of knowledge to the improvement of mankind." Its major activities in 1935 were carried on through the following departments and divisions: Department of Embryology (located in the Hunterian building of the Johns Hopkins University Medical School); Department of Genetics (laboratory at Cold Spring Harbor, Long Island, N. Y.); Geophysical Laboratory; Division of Historical Research, including the sections of Aboriginal American History, United States History, and History of Science, Department of Meridian Astrometry (headquarters at the Dudley Observatory, Albany, N. Y.); Mount Wilson Observatory, in Pasadena, Calif.; Nutrition Laboratory, in Boston; Division of Plant Biology (central laboratory at Stanford University); Department of Terrestrial Magnetism; Tortugas (Fla.) Laboratory of Marine Biology.

In 1935 a new division of Animal Biology was organized to include activities of the Department of Embryology, Department of Genetics, Nutrition Laboratory and Tortugas Laboratory, under

Dr. G. L. Streeter's leadership. A special committee was also appointed to study problems in the field of the physical sciences represented by the Geophysical Laboratory, Mount Wilson Observatory and the Department of Terrestrial Magnetism. An extensive programme of field investigations at the Maya ruins at Copan, Honduras, has been undertaken with cooperation of the Government of Honduras, and with aid of funds obtained from the Carnegie Corporation of New York. In November, 1935, the Institution joined with other Carnegie Organizations in this country and abroad in celebration of the one hundredth anniversary of the birth of its founder.

Income on investments for the year 1935 amounted approximately to \$1,500,000, required almost entirely for support and maintenance of major projects undertaken by the Institution. Results of its work were made known through technical and scientific journals, its yearbook, and a series of scientific monographs and news releases. To date the Institution has issued 675 volumes. Carefully prepared exhibits of research results were shown in Washington in December, 1935, and a limited series of lectures was given representing statements of investigation problems by staff members, including the third Elihu Root lecture delivered by Dr. George Sarton, Research Associate in the History of Science.

Elihu Root is Chairman of the Board of Trustees of the Institution, and John C. Merriam is President. Other trustees: Thomas Barbour, James F. Bell, W. W. Campbell, Frederic A. Delano, Homer L. Ferguson, W. Cameron Forbes, Walter S. Gifford, Herbert Hoover, Frank B. Jewett, Charles A. Lindbergh, Alfred L. Loomis, Andrew W. Mellon, Roswell Miller, Stewart Paton, John J. Pershing, Henry S. Pritchett, William Benson Storey, Richard P. Strong, James W. Wadsworth, Frederic C. Walcott, and Lewis H. Weed. Headquarters of the Institution are at Sixteenth and P Streets N. W., Washington, D. C.

CAROLINE ISLANDS. See JAPANESE PACIFIC ISLANDS

CARPENTER, LOUIS GEORGE. An American irrigation engineer, died at Denver, Colo., Sept. 12, 1935. He was born in Orion, Mich., Mar. 28, 1861, and graduated from Michigan Agricultural College in 1879, and did postgraduate work at the University of Michigan, 1881-84, and Johns Hopkins University, 1885-88. He became, in 1881, assistant professor of mathematics at Michigan Agricultural College, and seven years later, professor of engineering and physics at Colorado Agricultural College, where he served until 1911. In addition to his classroom duties in the following year, he was an irrigation engineer at, and later director of, the Colorado Experiment Station. While at Colorado, he introduced the first systematic instruction in irrigation engineering given in any American college.

Dr. Carpenter's first venture into field work took place in 1890, when he acted as special worker in the United States artesian wells investigation. He also served as an expert in irrigation litigation in the case of the United States vs. Rio Grande Dam, Elephant Butte International case. In 1903 he became state engineer of Colorado, serving until 1905, during which time he was the State's authority in the suits of Kansas and Wyoming against Colorado. Subsequently, he turned to free lance work and served as an engineering authority in the construction of many dams and irrigation enterprises. In 1907 he was appointed referee and

director of the commission named to settle the electric light controversy at Colorado Springs, and in the same year served as a member of the Irrigation Commission of British Columbia to determine the foundation for a new water code, which in 1908 was adopted by the British Columbia Parliament. In 1920, he served as an arbiter, chosen by both sides, in the dispute over the waters of North Platte, in the case of United States vs. Wyoming. During the World War he served on many committees, notably those of the Department of Information and the Explosives Board.

Many distinctions were conferred upon Dr Carpenter. Among these he received the degree of Doctor of Engineering from Michigan Agricultural College in 1927. In 1895 he had been made a Chevalier du Mérite Agricole of France and received a gold medal at the Paris Exposition of 1900. He was elected a fellow of the American Association for the Advancement of Science, and a member of many engineering societies, including the American Society of Irrigation Engineers, president, 1893-95; Colorado Engineering Council, president, 1923; Colorado Scientific Society, president, 1925-28, and served as a delegate to the World's Engineering Congress held at Tokyo in 1929. Dr Carpenter wrote many papers on irrigation activities for the technical press, and was editor of the department of irrigation of the Funk & Wagnalls *Standard Dictionary*. His researches and investigations in the line of irrigation have constantly been used as authority in the Western states in the settlement of disputes concerning water rights.

CARSON, BARON (Life Peer) OF DUNCAIRN, RT HON. SIR EDWARD HENRY CARSON. A British lawyer and statesman, died at Munster-in-Thanel, Kent, Oct. 22, 1935. Born in Dublin, Feb. 9, 1854, he was educated for the law at Trinity College, Dublin, was called to the Irish bar in 1877 and became Queen's Counsel in 1889. Also he was called to the English bar and took silk in 1894. Meantime, he had been returned to the British Parliament in 1892 as Unionist member for the University of Dublin, and was for a short time solicitor-general of Ireland. His entry into Parliament coincided with Gladstone's second attempt to pass the Irish Home Rule Bill, and Carson turned his efforts to its defeat. He devoted himself to the practice of his profession, and appeared as counsel in many famous trials, including the Russell divorce case, and the libel suit brought by Oscar Wilde against the Marquess of Queensberry.

In 1900 he was knighted and appointed solicitor-general, a position he held until the fall of the Balfour Government in December, 1905. Gradually he became the spokesman of the Irish minority in Parliament, but did not emerge as an important political figure until 1911, when another Home Rule Bill seemed imminent. He resisted the Parliamentary bill which would have curtailed the power of the Lords and enabled the Home Rule measure to be passed without an appeal to the people.

At this time, feeling in Ulster ran high, and Carson, speaking at a Unionist demonstration at Craigavon, near Belfast, endorsed the threat of armed resistance voiced by preceding local speakers. He claimed that Belfast was the key and that Ulster would never submit to a Parliament in Dublin. In Easter week of 1912 he presided at another Union meeting at Belfast, which Bonar Law, the new Unionist leader, addressed, and had the people repeat after him, "We will never in any circum-

stances submit to Home Rule." He now gave up his lucrative law practice to devote himself to the Anti-Home Rule Party, strong in Ulster. On Sept. 28, 1912, at a meeting in Belfast, he was the first to sign a solemn covenant binding the men of Ulster to stand behind one another in defending their position of equal citizenship in the United Kingdom and to refuse to recognize an Irish Home Rule Parliament.

The Ulster Unionist Council was organized, under his direction in the early part of 1913, into a provisional government, and a fund of £1,000,000 was guaranteed, he himself donating £10,000. He reviewed nearly 100,000 volunteers who had been organized a year previous, and reiterated his stand of fighting for what they wanted. The Government, suddenly realizing the determination of the Council, made overtures to Carson, and although he welcomed them, warned the Government that that did not establish a basis for separation. His advice to his adherents was "peace but preparation," and in the spring of 1914 he refused the offer of Asquith of a county option of exclusion for six years, saying that that would be "sentence of death with stay of execution." He claimed that there was but one policy to be followed—Ulster should be left out until she wanted to come in. He served as a delegate to the Buckingham Palace Conference, called by King George V in 1914, which broke down at the end of July, leaving Ulster in the position of having to make good her threats of force.

The outbreak of the World War, however, drew attention from the Irish question, and Sir Edward called upon the Ulstermen to join the British Army. He joined the Coalition ministry formed in 1915 as attorney general, but resigned in October of that year because he could not agree with the Government's policy in regard to Serbia. Under the Coalition government formed in December, 1916, he became first Lord of the Admiralty, but resigned the following July. Subsequently he became a member of the War Cabinet, without portfolio, resigning in 1918 because in his opinion the Government did not prosecute the war vigorously enough.

At the end of the War, Ulster regained first place in his thoughts, and at the General Election of 1918 he left Dublin University to represent one of the divisions of Parliament. On the anniversary of the Battle of the Boyne in 1919, he restated the claims of Ulster and threatened to call out the volunteers if the claims were in any way endangered. When, late in 1919, Lloyd George submitted his bill for the reform of the government and the establishment of two parliaments, one in Dublin and one in Belfast with a Federal Council for all Ireland, he modified his attitude, and worked to secure a strong Unionist majority in the elections of 1921 for the first Parliament, and by his efforts, staving off Roman Catholic domination of Protestant Ulster. In that year he accepted the position of Lord of Appeal in Ordinary, holding that position until 1929, and a life peerage as Baron Carson of Duncairn. At the time of the conclusion of the treaty which constituted the Irish Free State and when the bill was before the House, he was bitter in its denunciation. In 1924 he protested vehemently against the bill permitting the British Government to appoint a third Commissioner on the Irish Boundary Commission, due to the default of Ulster, but welcomed the agreement, made in 1925, between the British Government and the government of the Irish Free State and Northern Ireland, which finally settled the question of Home Rule.

CASE SCHOOL OF APPLIED SCIENCE. An engineering college in Cleveland, Ohio, founded in 1880. In the autumn of 1935 the enrollment was 997. The 1935 summer session registration was 112. The faculty numbered 90. The endowment amounted to \$4,100,000, while the net income for the year was \$314,935 (10 mos. ending June 30, 1935). The library contained 26,089 volumes. President, William Elgin Wickenden, D. Eng., D.Sc., LL.D.

CASUALTY INSURANCE. See **INSURANCE.**

CATALONIA. A region in northeastern Spain, comprising the provinces of Barcelona, Gerona, Lerida, and Tarragona. Chief city, Barcelona. See **SPAIN.**

CATHOLIC UNIVERSITY OF AMERICA, THE. A national pontifical institution of higher education, located in Washington, D. C., and founded in 1887 by the Roman Catholic hierarchy of the United States with the approval of the Holy See. The enrollment for the autumn of 1935 was 1455, of which 800 were in the Graduate School, 25 in Canon Law, 43 in Law, 420 in Arts and Sciences, 145 in Engineering and Architecture, 125 in Seminary, 60 in Social Work, and 65 in Sacred Sciences. The summer school enrollment for 1935 was 1510. Thirty-four religious houses, with an approximate enrollment of 2500, are affiliated with the University. The faculties number 190 teachers. The endowment amounted to \$3,500,000, and the annual collection (1935) totaled \$294,000. In the library there were 34,000 volumes. Chancellor, the Most Rev. Michael J. Curley, S.T.D. Archbishop of Baltimore; Rector (Acting), Rt. Rev. Monsignor Patrick J. McCormick, Ph.D.

CAYMAN ISLANDS. See under **JAMAICA.**

CELEBES. See **NETHERLAND INDIA.**

CELEBRATIONS. Chronologically, the first of the major anniversaries of the year was the quadricentennial of the founding of Lima, Peru. A three-day celebration was held from January 18 to 20, closing with the unveiling of several monuments in honor of those who started the Ciudad de los Reyes, as the city was thus named, in 1535.

Beginning Jan. 26, 1935, the State of Michigan opened a two-year celebration of its centennial of Statehood, the two years commemorating the period a hundred years earlier during which the territory struggled for recognition as a State and resulting in the Act of Recognition signed on Jan. 26, 1837. Throughout the year 1935 more than 150 local celebrations were held, running from historical and pioneer picnics to elaborate pageants, parades, and special programmes that lasted from 3 to 10 days. The U.S. Post Office recognized the celebrations by the issuance of a special commemorative 3-cent stamp.

The twenty-fifth anniversary, or Silver Jubilee, of the accession to the throne of King George V was honored throughout the British Empire on May 6. The major celebration was, of course, held in London, with representations from all sections of the empire in attendance. With the major features of the London observance broadcast to all parts of the world, the far-flung portions of the empire were enabled to participate more enthusiastically in their own celebrations.

The opening of a Statewide observance of the centenary of the first settlement of the State of Connecticut was held in Hartford on April 26. A hundred and fifty towns throughout the State held local celebrations during the summer and autumn, with exercises ranging from elaborate pageants,

plays, and concerts to formal parades, often with colorful and historical floats. Though Hartford honored the official close of the celebration on October 12 with an extensive parade, a display of fireworks, and a costume ball, other localities continued to observe the tercentenary until the close of the year. A special 3-cent commemorative stamp was issued by the U.S. Post Office.

The California-Pacific International Exposition in Balboa Park, San Diego, Calif., was opened on May 29. The opening was heralded by a speech by President Roosevelt transmitted by telephone from Washington and amplified for the audience across the continent. The Exposition closed for the year on November 11, and, it was announced, would again be opened on Jan. 15, 1936. The total number of visitors during the 167 days was 4,784,811. Aside from daily open-air concerts, the chief features of interest were centered in an exhibit of the Ford Motor Co., housed in a separate building; in the "Redwood Empire" an exhibit of the products and attractions of California's various counties, and in the "Palace of Electricity and Varied Industries," where foreign and national products were displayed. Other attractions were shown in "The Tower to the Sun," in the exhibit of the Standard Oil Co., in the "Palace of Travel, Transportation, and Water," the "Palace of Education," "Palace of Science," "Palace of Art," etc. Of the concessions, the Midget Village attracted the greatest interest, with the Zoro Gardens and the Hollywood Hall of Fame closely approaching.

On November 20, the birthday of Samuel L. Clemens, known to the world as Mark Twain, the 100th anniversary of his birth was celebrated simultaneously in New York, San Francisco, Bermuda, and Honolulu, where the humorist had lived and written. Under the chairmanship of Nicholas Murray Butler, the main programme was held in New York City, to which the other groups were connected by radio. The world of American letters was represented at each gathering, and the international character of the celebration was observed by the messages sent from notable literary men in other countries.

CEMENT. The production of finished Portland cement in the United States for the calendar year 1935, according to a statement issued by the United States Bureau of Mines, totaled 76,471,000 bbl. as against 77,682,000 bbl. in 1934, or about 43 per cent of the peak production of 176,299,000 bbl. in 1928. Shipments for the year amounted to 74,934,000 bbl. as compared with 75,917,000 bbl. in 1934. A total of 384,993 bbl. of hydraulic cement were exported to the value of \$935,763, as compared with a total of 566,462 bbl. valued at \$1,334,046 for 1934. However, the months August to November inclusive in 1935 showed a distinct gain over the same months of 1934 with a total of 144,362 bbl. as compared with 112,365 bbl. Imports of hydraulic cement during 1935 totaled 617,023 bbl., valued at \$609,076, as compared with 261,844 bbl. valued at \$253,775 for the corresponding period of 1934.

CENTRAL AMERICA. See **BRITISH HONDURAS, COSTA RICA, GUATEMALA, HONDURAS, NICARAGUA, PANAMA, SALVADOR, EL.**

CEYLON, sê-lôn'. A British crown colony. Area, 25,332 sq. miles; population (1931), 5,312,548 compared with 5,463,000 (1933 estimate). Chief cities (with 1931 populations): Colombo, the capital (284,155), Jaffna (45,708), Galle (38,424), Kandy (36,541). During 1934 the school attendance

totaled 653,509; the Ceylon University College had 450 students enrolled in 1933-34.

Production and Trade. The area under cultivation during 1934 amounted to 3,313,000 acres. Rice, rubber, tea, coconuts, cacao, cinnamon, citronella oil, areca nuts, tobacco, spices, graphite and precious and semi-precious stones were the main products. Livestock in Ceylon (1934): 1,094,000 cattle, 522,000 buffaloes, 220,000 goats, 69,000 sheep, 38,000 swine. In 1934, total imports were valued at Rs217,088,892; total exports, Rs263,887,745, including tea (218,695,000 lb.), Rs145,063,000; rubber (79,713 long tons), Rs56,615,226; plumbago (231,385 cwt.), Rs1,654,681 (the average value of the rupee was \$0.3788 for 1934). There were 951 miles of railway; 10,419 miles of telegraph line; and 50,614 miles of telephone line. Telephone service between Ceylon and Great Britain was inaugurated during October, 1935.

Government. For the year ended Sept. 30, 1934, exclusive of Ceylon Government Railway revenue and expenditure, revenue totaled Rs104,100,361; expenditure, Rs93,444,581; public debt, Rs116,901,769. Budget estimates (1934-35): revenue, Rs98,052,000; expenditure, Rs99,559,479; (1935-36): revenue, Rs106,000,000; expenditure, Rs110,731,000. Government was administered by a governor, aided by a state council of 61 members (50 elected, 8 nominated unofficial, and 3 officers of state) Governor in 1935, Sir R. L. Stubbs.

Maldivé Archipelago. A chain of 2000 islets (atolls), 400 miles southwest of Ceylon of which they are a dependency. Land area, 115 sq miles, population (1931), over 79,000 Moslems. Malé was the seat of the government. Millet, coconuts, dried fish, cowrie shell, tortoise shell, and edible nuts were the main products. An elected Sultan headed the government, aided by a Peoples' Assembly of 33 members (28 elected and 5 nominated) and a cabinet of 5 ministers. The Sultan sends an annual embassy to Colombo, Ceylon. Sultan, Hasan Noor-ud-Din (elected Feb. 1, 1935).

History. In the southwestern part of Ceylon, with a population of over 3,000,000, it was estimated that almost 1,500,000 persons had contracted malaria, and the deaths (from all causes) in that area were over 92,000 during the six months, November, 1934, to April, 1935.

CHACO DISPUTE. See BOLIVIA and PARAGUAY under *History*.

CHAD. See FRENCH EQUATORIAL AFRICA.

CHAIN STORES. See CALIFORNIA and VERMONT under *Political and Other Events*.

CHAMBER OF COMMERCE OF THE UNITED STATES. A national federation of trade associations and local or regional commercial organizations, established in 1912 primarily as a vehicle for the expression of national business opinion on important economic questions. The membership in 1935 consisted of 1475 chambers of commerce and trade associations covering the entire United States. The chamber maintains 12 service departments, covering the main divisions of business activity. Agriculture; construction and civic development; commercial organization; manufacture; domestic distribution; finance; foreign commerce; insurance; natural resources production; trade association; transportation and communication; research. It publishes a monthly magazine, the *Nation's Business*.

The chamber's twenty-third annual meeting was held in Washington, D. C., Apr. 29 to May 2, 1935. Cumulative disaffection with the major features of the Federal Administration programme for

business recovery was reflected in many of the addresses delivered during the four-day session. This disaffection was ultimately expressed in a stormy session by the passage of resolutions that were directly opposed to the measures proposed by the Administration or already in operation.

The measures opposed were: (1) Modification in the Federal Reserve System "except such as will supply further strength and further usefulness to the plan." The proposed changes, in the opinion of the chamber, "would be to subject the operations of the system to a greatly increased danger of political domination." (2) The Utility Bill of 1935, as introduced in Congress. In its resolution, the chamber reiterated its long commitment to the regulation of utilities by adequate State commissions and concurrent action, where necessary, with the Federal Power Commission. It recognized the existence of abuses that in some instances have accompanied the growth of utility enterprises, and concurred in the need for preventing such abuses. The proposed Bill, however, "not only would seek to superimpose Federal legislation upon State regulation of operating companies, but would undertake to destroy utility holding companies." (3) In regard to the aim of the Administration to have the Congress extend the National Industrial Recovery Act for two years, the chamber noted that "the present law should be allowed to expire in June, but that prior to expiration substitute legislation should be enacted for a definitely limited period on a temporary and voluntary basis." (4) The proposed amendments to the Agricultural Adjustment Act, "to increase the control over any producer, processor, or distributor by license, quota, or otherwise, in the lawful and independent operation of his own enterprise," were opposed. (5) The propriety and the constitutionality of the proposed social security measure were questioned, with a strong recommendation that legislative action be postponed pending a full exploration of the whole subject by a Congressional committee. (6) The measures designed to establish a thirty-hour working week in business and industry and to create a permanent National Labor Relations Board were "definitely opposed" by the chamber. The former "not only would prevent that flexible adjustment of hours so essential to the proper conduct of business operations under constantly varying conditions, but it will inevitably result in marked increases in prices, in turn producing decreased consumption, decreased production and consequent unemployment."

Measures supported by the chamber were: Modifications of the tariff that would lead to reciprocal trade agreement; the Federal regulation of all forms of interstate transportation; direct subsidies for the rehabilitation of the merchant marine; a cooperation between State and Federal governments leading to the withdrawal of sub-marginal lands from production; and the Federal regulation of air transport in domestic and foreign commerce. The chamber also strongly advocated the enactment of laws against "the spread of propaganda and activity by numerous subversive groups" whose common goal is "the violent overthrow of the existing economic and social order in the United States."

The chamber elected Harper Sibley of Rochester, N. Y., as president. The vice-presidents were David F. Edwards, Boston, Mass., and T. Guy Woolford, Atlanta, Ga. See INTERNATIONAL CHAMBER OF COMMERCE.

CHAMBON DAM. See DAMS.

CHANDERNAGOR. See FRENCH INDIA.

CHANNEL ISLANDS. See GREAT BRITAIN.

CHAUTAUQUA INSTITUTION. An educational movement established at Chautauqua, N. Y., in 1874 by Lewis Miller and Bishop John H. Vincent, both prominent in the Methodist Episcopal Church. Its original idea was that of an assembly for Sunday school teachers, but it was gradually developed into an institution affording during the summer months a series of correlated lectures and entertainments. The three general fields of activity are the general assembly, consisting of an educational and popular series of lectures and addresses, symphony orchestra and other concerts, operas, plays, and so forth; the summer school, offering in its 18 departments credit courses under the direction of New York University; and a home-reading circle, in which four or more outstanding books are designated for reading during the year, in addition to a news narrative appearing in a monthly review. The attendance at the annual session is approximately 40,000, while the enrollment in the summer school is about 1500. The officers in 1935 were: George E. Vincent, honorary president; Arthur E. Bestor, president; William L. Ranson, chairman of trustees; Ernest Cawcroft, chairman of the executive board; Charles E. Pierce, secretary; and Jessie M. Leslie, treasurer.

CHEESE. See DAIRYING.

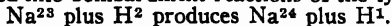
CHEMICAL EXPOSITION. See CHEMISTRY, INDUSTRIAL AND APPLIED.

CHEMISTRY. During the year 1935 work was actively continued on the transmutation of one chemical element into another; also on "heavy" hydrogen and "heavy" water, and on isotopes. As reported in *Science* (September 27), the transmutation of one chemical element into another by bombardment with high-speed subatomic "bullets," is made possible by an electrical sorting arrangement inside each atom. How the subatomic sorter helps weed out parts of the incoming atom bullets and allows others to enter the nucleus and create a different, heavier atom, is explained in a new theory just announced at the University of California at Berkeley.

Drs. J. R. Oppenheimer and M. Phillips, in the *Physical Review*, described how their explanation of the sorter's operation clears up a mystery of certain puzzling experiments performed by their colleagues, Prof. E. O. Lawrence, Dr. Edwin McMillan, and Dr. R. L. Thornton.

Professor Lawrence's research had found many cases where an element, bombarded with deuterons from his giant sling-shot accelerator, was increased in mass by a unit of one. Thus, aluminum of mass 27, when struck by a deuteron of mass two, turned into aluminum of mass 28 and released a hydrogen particle of mass one, a proton.

Similarly sodium, whose chemical symbol is Na, entered into bombardment reactions of the type:



In each case part of the deuteron (H^2) was captured and went to form a heavier atom, while the rest of the deuteron turned into a proton (H^1).

As explanation, Drs. Oppenheimer and Phillips suggest that the deuteron is not really a single particle but a composite unit containing a neutron and a proton; the proton having electrical charge and the neutron being without one. Don't think of the deuteron, however, as a round, hard particle; for its wavelike nature means it is not confined to a sharply limited volume. As a matter of fact, there is

a good chance that both, or either, the neutron or proton, of which the deuteron is composed, may be some distance away from the deuteron's centre of mass.

Coming up to an atom in the target, say an aluminum atom, the neutron and proton in the deuteron particle behave quite differently. The strong electrical barrier of the atom nucleus stops the charged particle, the proton; but it has no effect on the non-electrical neutron. The latter goes right through the barrier, enters the aluminum nucleus, is captured, and in joining creates a new and heavier kind of aluminum.

One way to think of the atomic happening is to conceive an army half of which consists of men with gas masks and half without. The army is attacking an enemy whose sole defense is a cloud of poison gas thrown up around it. The attacking force comes to the gas cloud. Those parts of the deuteron army with gas masks (the neutrons) can go through the gas (electrical barrier). Those parts without masks (protons) must stay outside and retreat. The analogy falls down in that one deuteron does not consist of many neutrons and protons but only of a single pair. A stream of deuteron particles, however, might be likened to the attacking army pictured.

It is considered likely that *atomic nuclei* are built of protons and neutrons. The neutron may be regarded as having been derived from a proton (H^+) and the negative electron; that is, a "collapsed hydrogen atom."

Since the discovery of "induced radioactivity" by the Joliot's, of Paris, much related work has been done by Fermi and others. Henry A. Barton, of the American Institute of Physics, says: "As a result, it is known that most of the chemical elements can be converted into radioactive elements by nuclear transitions caused by bombardment by either neutrons, alpha particles, or protons. The radioactive elements produced are sometimes isotopic with, sometimes adjacent to, those bombarded. In the latter case, chemical separations have been effected. The average lifetime of the activity varies from a few seconds to a few days. Positive bombarding particles are effective only on elements of low atomic number. Neutrons affect elements up to and including uranium. The radioactive products in the first case usually emit positrons, in the second case, negative electrons."

Heavy Hydrogen. In work under Prof. Hugh S. Taylor, of the Frick Chemical Laboratory of Princeton University, 10 drops of a precious liquid were prepared which were richer in triple-weight hydrogen (H^3) than any ever made before.

In addition to the hydrogen isotope, *deuterium*, of mass 2 discovered by Prof. Harold C. Urey, of Columbia University, for which he received the Nobel Prize in 1934, it is now known that a third hydrogen of mass 3 also exists. This still heavier atom of hydrogen has been produced artificially in Cambridge, England, and in the Palmer Physical Laboratory of Princeton University by nuclear disintegration processes.

In the drinking variety of water the rare isotope of hydrogen is present to the extent of only one part in ten thousand million. Such extremely minute concentrations are comparable with those encountered by Marie Curie and her husband in their original experiments on the extraction of the element radium from its ores. Radium ore which will yield $\frac{1}{2}$ a gram of radium for 5 tons of ore is considered remarkably rich. Radium ores produc-

ing $\frac{1}{2}$ gram of radium for 100 tons of ore are worked commercially.

More than a year ago by the use of the mass-spectrograph designed by Dr. Walter Bleakney, of Princeton, it was shown that the "heavy water" (deuterium oxide) contained small amounts of the third isotope, *tritium*, but in a concentration estimated at one part in 200,000 of the "heavy water" examined.

As stated by Professor Taylor: "During the year the same process of concentration by electrolysis has been continued by Dr. P. W. Selwood, of the Frick Laboratory. There now remains a residual 10 drops ($\frac{1}{2}$ cubic centimeter) from the electrolysis of 75 tons of ordinary water. The tritium concentration has steadily increased until it is now approximately one part of tritium for every 10,000 parts of deuterium water. The experiments show that in ordinary water this type of hydrogen is present to the extent of only one part in ten thousand million parts of water.

"Similar experiments to ascertain whether the electrolytic process concentrates the heavy oxygen of mass 18 over that of normal oxygen of mass 16 have shown that this method is much less efficient. A concentration of water by electrolysis from 120,000 volumes to one volume increased the heavy oxygen concentration merely from one part in 500 to one part in 450.

"While such changes in the ratio of the two species are sufficient for many scientific experiments, it will be necessary to utilize other methods of separation if it is desired to produce pure specimens of the two forms of oxygen similar to those already obtained with deuterium, the heavy hydrogen of mass 2."

Heavy Neon. Preparation of 99 per cent pure "heavy" neon was announced at the meeting of the British Association for the Advancement of Science by Dr. Gustav Hertz, of Berlin. Ordinary neon, which is the gas widely used in reddish advertising signs, consists of the isotopes Ne^{20} and Ne^{22} , the fraction having an atomic weight of 20 predominating. These isotopes occur in the atmosphere in the proportion of nine to one, so the chemical atomic weight is the average atomic weight of the isotopes, namely, 20.2. The concentration of the isotope of mass 22 furnishes the heavier neon in usable or experimental quantities. According to Dr. Aston, of Cambridge University, the concentration of the heavy neon should be a great aid to experiments on nuclear disintegration, because by employing the heavy neon gas, investigators can be sure that its weight is unambiguously 22. Hertz employs the diffusion technique for separating the isotopes of neon. In the diffusion process the lighter kind of neon passed through a little faster than the heavier gas. In five hours it is possible to produce the heavier neon in concentrations of 98 to 99 per cent.

Heavy Oxygen Water. The production of "heavy oxygen water" has been demonstrated at the University of Manchester, England, by T. B. M. Herbert and M. Polanyi. The new apparatus is designed to produce $2\frac{1}{2}$ grams of a gram of the water per day, or about $\frac{1}{10}$ of a drop. As stated in *Science Service*, 1 atom out of every 100 of the oxygen atoms in heavy oxygen water has a mass of 18 instead of the usual mass 16 of ordinary oxygen. In ordinary water the normal proportion is about one in 500. Concentration of the heaviest oxygen is considered a real achievement, since the difficulties are much greater than in separating the famous three kinds of hydrogen discovered.

Prof. G. Hertz, of Berlin, made the world's first sample of heavy oxygen water and presented the precious 10 drops ($\frac{1}{2}$ gram) to Professor Polanyi, who was formerly professor of physical chemistry at the Kaiser Wilhelm Institute. The isotopes or atom varieties of neon, gas now used in electric signs, were also separated by Professor Hertz. Only a very small amount of heavy oxygen water has been prepared. It is probably the world's rarest liquid.

Heavy Water, Production of. Dr. D. S. Cryder, of Pennsylvania State College, informed the American Chemical Society that there is a prospect of obtaining "heavy" water (deuterium oxide, D_2O) on a relatively large scale. Dr. Cryder told how heavy water can be concentrated by distillation of ordinary steam. About a trillion pounds of steam are generated annually by the U.S. power and light industry and 2,000,000 pounds of the now-expensive liquid would result if only 1 per cent of this steam had its heavy water extracted. Dr. Cryder predicted that the new Penn State method would allow production of heavy water at less than \$2 a gram, 10 cents a drop, the present lowest price quoted by Norway where cheap electricity is available. The present method of concentrating deuterium-rich water is by electrolysis. Water with its hydrogen of the double-weight variety—deuterium to chemists—is useful in tracing chemical reactions which may lead to new chemical knowledge of great value to industry.

Isotopes. Dr. F. W. Aston, of Cambridge University, as president of the Section of Mathematics and Physical Sciences of the British Association for the Advancement of Sciences, lectured on "The Story of Isotopes" at the meeting held at Norwich, September, 1935. According to Aston, more than 250 isotopes are known. One of the most complex elements so far observed is tin (Sn), with 11 isotopes ranging in mass from 112 to 124. The chemical atomic weight of tin is 118.70.

Aston has found that his second mass-spectrograph (atom weigher) is capable of an accuracy, in favorable cases, of 1 in 10,000.

Not long ago Lord Rutherford and his colleagues announced to the Royal Society that some of the weights of common elements needed revision. Employing a partially completed mass-spectrograph, Aston has announced in a letter to *Nature* the following masses: For hydrogen, 1.0081; for deuterium or double-weight hydrogen, 2.0148; for helium, 4.0041; for carbon, 12.0048. According to a determination made by Aston in 1926, light-weight hydrogen has a mass of 1.0078; contrasted with the new value of 1.0081. Aston's new atomic weights are as yet provisional, and in no case does he claim a greater accuracy than one in 10,000.

Dr. Aston says: "I am never likely to regret the underestimate of hydrogen's atomic weight that I made in 1926 however serious it may ultimately turn out to be, because of the fundamental part it played in encouraging the search for heavy weight hydrogen (called deuterium) which was discovered in America."

As stated in *Science*, the discovery of deuterium recognized by the recent Nobel prize award to Prof. Harold C. Urey, of Columbia University, resulted from the supposed discrepancy between the atomic weight of hydrogen determined by chemical and physical means after it had been discovered that oxygen, the standard element, was actually triplets instead of just a single element. If Dr. Aston had arrived at the present value of hydrogen's

mass earlier, the successful search for heavy hydrogen might never have been started.

Molecules, Giant. Prof. George L. Clark, of the University of Illinois, and a pioneer in X-ray work, has reported the discovery of giant molecules which weigh about 250,000 times as much as the hydrogen molecule ($H_2=2$). The molecules are egg-shaped and are so large they may be seen with the aid of a microscope, which is the first time any molecule has been seen with such apparatus. These giant molecules are over seven times as large as previous estimates of rubber molecules, yet they are just at the limits of the microscope, being but $\frac{1}{400,000}$ of an inch long.

It has long been known by botanists that the basic structure of cellulose and plant products consists of exceedingly small crystalline particles linked endwise. It appears that these structures could be seen in a microscope and were composed of giant molecules. The reason why scientists did not see the actual molecules before was that they were embedded in a jelly-like material which had previously resisted any breaking-down process. Molecules of such huge dimensions have not yet been produced in the laboratory, but research is expected to reveal their structure and to lead to their production by chemists.

Pure Iron. As reported in the News Edition of *Industrial and Engineering Chemistry*, the purest iron ever made in quantities sufficient for large-scale laboratory tests has been prepared in the Metals Research Laboratory of the Carnegie Institute of Technology, Pittsburgh, Pa.

After analysis of many types of so-called pure iron, "carbonyl" iron was selected, and a special furnace was designed to remove carbon, oxygen, nitrogen, and sulphur, and minute quantities of several other elements that still remained as impurities. The iron was placed in the furnace and heated to just below melting point, and a stream of purified hydrogen was passed over the sample for several hours. To prevent contamination, an iron tube that previously had been purified by the hydrogen treatment was used as an enclosure for the sample. The hydrogen removes practically all the carbon, oxygen, and nitrogen, leaving an iron which contains extremely small quantities of impurities and is probably better than 99.95 per cent pure. The impurities still remaining—silicon, nickel, manganese, chromium, and copper—are present in quantities not more than a few parts in a million, and can be determined accurately only by spectroscopic methods. About 3 pounds of iron are made at one time by the above process.

The next step was to subject the iron to standard metallurgical test. For measurement of the expansion of iron when it is heated, a special dilatometer of high accuracy was designed and constructed. When ordinary iron is heated it expands gradually, until at a little above $900^\circ C.$, known as the critical temperature, it suddenly stops increasing in length and actually contracts. When the temperature is increased above this critical temperature the iron resumes its expansion. Similar changes take place in reverse order when iron is cooled.

Some metallurgists had believed that this change in behavior of iron might be due to impurities, and that if a pure iron were tested this reaction would not occur. Tests of the sample made at the Carnegie Institute of Technology did not support this theory. The pure sample showed a definite transformation change similar to that of impure iron, but the change was much sharper, having taken place within $1^\circ C.$

At the present time in the Metals Research Laboratory tests are being made of steels of unusually high purity made from the iron described above, as well as of commercial steels, to obtain data on the true constitution of high-purity alloys and information on their ability to react.

Recovery of Gold from Solution. Dr. W. E. Caldwell, of Oregon State College, has reported the recovery of gold from solutions in which it is present in as small amounts as one part in four billion. Tests indicated that it was possible to recover up to $\frac{1}{8},000,000$ of an ounce from 10.5 gallons of water, which is one part in four billion. The process was applied to sea-water. Samples pumped from Puget Sound yielded from $\frac{1}{2},500,000$ to $\frac{1}{250,000}$ of an ounce per metric ton of water. It appears from this that there is less than a tenth of a cent's worth of gold at the present market value in a ton of sea-water. The method may be useful in removing gold from ores with a very low content of the precious metal.

Sugar from Dahlias. According to *Science*, the discovery of a source of sugar in dahlias, claimed to be commercially practicable, was reported by Dr. LeRoy S. Weatherby and Dr. Wray M. Rieger, of the University of Southern California. Levulose, the kind of sugar which can be made from dahlias, is nearly twice as sweet as the ordinary cane or beet sugar. It will therefore give people who wish to reduce or remain slim the same sweetness with less weight-adding calories, and save money while doing it. Also, since doctors believe flower or fruit sugar to be oxidized more easily than any other kind, its commercial production may bring relief to many sufferers from diabetes. That sugar can be obtained from dahlias and other fleshy-rooted flowers has been known for some time. Some years ago, chemists of the National Bureau of Standards worked out a process for making inulin from the roots of the Jerusalem artichoke, a kind of sunflower. Dahlias and sunflowers are members of the same plant family. Two different processes have been worked out for the making of dahlia sugar. In one, the juice of the heated dahlia roots is extracted with a large hydraulic press, and the inulin or "dahlia-starch" contained in the juice converted to sugar syrup. In the other, the inulin is converted into sugar within the tubes or roots, and then extracted by means of diffusion batteries, as is done in the manufacture of beet sugar. This process may have a special commercial value because of its adaptability to use in beet sugar factories already built, which now waste large amounts of valuable plant space during the idle seasons. Dahlias have approximately the same yield of roots to the acre as sugar beets when properly cultivated. California is well suited for the production of dahlia sugar because of the abundance of dahlias in gardens of the state. One dahlia garden now has 17 acres under cultivation, and others could easily be grown on short notice.

Why Coffee Grows Stale. According to Dr. R. O. Bengis, of Yale University, coffee grows old because of the action of oxygen on the aromatic fatty substance in the beans which is responsible for their delicate flavor. The process is somewhat analogous to the spoiling of butter. The only thing to be done about it is to get freshly-roasted coffee. Tests on coffee marketed in vacuum cans showed that this method of packing affords only partial protection to the coffee. Even with the best vacuum cans there appears to be enough air left in the cans to start oxidation of the aromatic fatty substance.

Scientific Societies. The American Chemical

Society met in New York City April 22-26. The registrants numbered 5105, which was a record. The Society has a membership of over 17,000. The following papers were presented at the general meeting: Roger Adams, President, American Chemical Society, Introductory Address. Alfred H. White, University of Michigan, "The Scientific Foundations of the American Chemical Industries." Lamot du Pont, President, E. I. du Pont de Nemours and Co., "Human Wants and the Chemical Industries," William B. Bell, chairman of the board, American Cyanamid and Chemical Corp., "Recovery—by Alchemy or Chemistry?" Thomas Midgley, Jr., vice president, Ethyl Gasoline Corp., "The Role of Chemistry in the Next Hundred Years."

At the New York meeting of the Society, President Roger Adams announced that the Priestley Medal, the highest honor of the Society, awarded every three years for distinguished service to chemistry, would be presented to William Albert Noyes, emeritus director of the laboratories of the University of Illinois, to crown a chemical career.

President Adams also announced that Raymond M. Fuoss had been selected to receive the American Chemical Society Award in Pure Chemistry (initiated by A. C. Langmuir)—a diploma and \$1000. Unlike most of the Society's awards, this is for outstanding research by a chemist under 31 years of age. The award was made to Dr. Fuoss as the author of the first comprehensive theory of electrolytic solutions which, at lower concentrations, applies to all solvent media and to all electrolytes.

The 90th meeting of the Society was held in San Francisco, August 19-23. The total registration was 1111. The divisional papers numbered 270.

At the general meeting on Monday afternoon, the American Chemical Society Award in Pure Chemistry (initiated by A. C. Langmuir) was presented to Raymond M. Fuoss, of Brown University, fifth recipient of the honor. Dr. Fuoss' address, incident to the award, on "Properties of Electrolytic Solutions" was given on the following day before the Division of Physical and Inorganic Chemistry.

The previous recipients of this award were: Linus Pauling, 1931, for work on the structure of crystals and the nature of the chemical bond; Oscar Rice, 1932, for studies of the mechanism of chemical reactions; F. H. Spedding, 1933, for the application of spectroscopy to the study of atomic and molecular structure; and C. Frederick Koelsch, 1934, for researches on chemistry of condensed ring systems.

Two distinguished foreign guests of the Society, Professors L. Ruzicka and James Franck, made the principal addresses of the afternoon. Dr. Ruzicka gave a technical discussion of the organic chemistry of the male hormone, while Professor Franck chose the topic "Photochemistry of Chlorophyll." Dr. Ruzicka was also heard in the Division of Organic Chemistry on "Structure of Compounds Containing Many-Membered Rings." Interesting models were shown, in projection form, indicating the possibilities of dovetailing and packing carbon atoms in rings of 15 and more.

One of the most interesting lectures and demonstrations was by F. O. Lawrence, young University of California physicist, who exhibited a piece of sodium chloride which had been bombarded with deuterons and partially converted into sodium with atomic weight 24 (radio-sodium), and entertained the Division of Physical and Inorganic Chemistry

with the rat-tat-tat of the Geiger counter as the new substance demonstrated its strange behavior.

As reported in the News Edition of *Industrial and Engineering Chemistry*, a conference was held at Dearborn, Mich., May 7 and 8. It was initiated by the Chemical Foundation, Inc., and held under the joint auspices of the president of the American Farm Bureau Foundation, the Master of the National Grange, the president of the Chemical Foundation, Inc., and the chairman of the National Agricultural Conference.

The purpose of the conference was to survey the variety of farm products which, through the application of organic chemistry, may be transformed into raw materials usable in industry, and to develop a plan for promoting an increasing use of American farm products in American industry. It was the hope that, through this new alignment of agriculture, industry, and science, new approaches might be made to the long-present problem of non-food uses for agricultural products and the creation of industrial demands that might prevent the accumulation of crop surpluses, perhaps leading to the production of new types of crops which would replace products used almost exclusively for food or feed.

The 68th meeting of the Electrochemical Society was held in Washington, D. C., October 10, 11, and 12, with more than 225 in attendance and participating in a technical and social programme. The scientific technical session on the first day dealt with high-temperature reactions; on the second day with dry cells; and on the final day with storage batteries. The afternoon session of October 12 was on electro-organic chemistry and electro-deposition.

C. E. K. Mees delivered a public lecture on color photography. He gave the history of color photography, explaining the principles underlying the various attempts and displaying samples of product by projection. His lecture was delivered with great clarity and was well designed to give his listeners a far better appreciation of what has been accomplished and the degree of perfection realized in the most recent of these processes, to which the name Kodachrome has been given.

Frank J. Tone was presented the Acheson Medal and prize of \$1000. This award is made biennially to those who have made distinguished contributions to any of the branches fostered by the Electrochemical Society.

The next meeting will be held in Cincinnati, Apr. 23 to 25, 1936, with the two main sessions devoted to inhibitors and high-pressure low-pressure gas reactions.

Awards and Medals. The William H. Nichols Medal of the New York Section of the American Chemical Society was awarded to Father Julius A. Nieuwland, professor of organic chemistry of the University of Notre Dame. This honor has come to Father Nieuwland for "basic work on syntheses from unsaturated hydrocarbons," and in particular for the successful research which he has conducted in investigating the chemistry of acetylene. He has produced a number of new and unusual unsaturated hydrocarbons and hydrocarbon derivatives. One of the industrial results of his fundamental researches is "Duprene," a synthetic rubber-like material which is now on the market.

Charles A. Kraus, of Brown University, was the twenty-fourth chemist to receive the Willard Gibbs Medal, which is the award of the Chicago Section of the American Chemical Society. The

medal was founded by W. A. Converse and, through the years, has grown in significance among such honors. Dr. Kraus was selected by the Jury of Award because he has added greatly to the technic of carrying out chemical reactions in vacuum systems, has made valuable contributions to the knowledge of reactions in liquid ammonia, has enlarged our understanding of the chemical behavior and characteristics of metals, has developed extensively the field of the elements germanium and gallium, and has contributed new ideas and experimental facts related to metallo-organic compounds, especially those of tin, germanium, and gallium.

The Herty Medal, given by the students and staff of the Chemistry Department of the Georgia State College for Women at Milledgeville, Ga., for excellent service rendered in the field of chemistry within the Southeast, was presented on May 18 to Francis P. Dunnington of the University of Virginia. The award is in recognition of the large amount of research which has been conducted by, and under the direction of, Dr. Dunnington and especially for his splendid record as a teacher of chemists who have attained renown.

The Western New York Section of the American Chemical Society, at its meeting on May 7, presented the J. F. Schoellkopf Medal to F. Austin Lidbury, president and general manager of the Oldbury Electro-Chemical Co., Niagara Falls. The citation read: "The Western New York Section of the American Chemical Society awards the J. F. Schoellkopf Medal to F. Austin Lidbury who, in time of need, contributed his successful phosgene-producing process to the United States Government and who, by his constructive interest in the American Chemical Society and related technical societies and by his successful development and management of a chemical manufacturing establishment, has demonstrated both scientific and administrative abilities of a high degree."

The Tappi Medal was awarded to Edwin Sutermeister, chief chemist of S. D. Warren and Co. Mr. Sutermeister was the originator of the pebble-mill test for evaluating paper pulp. The great improvement in wood pulp during the past 20 years may be largely attributed to the testing work done by consumers of pulp. His other particular technical interests include the development and introduction of domestic clays for loading and coating of paper, the development of starches and gums for coated paper work, improvements in soda pulping and size manufacture and application. The medalist is probably most widely known as the author of "The Chemistry of Pulp and Paper Making," which has run into two large editions, and of one of the American Chemical Society Monographs, "Casein and Its Industrial Applications." He is also the author of many papers which have appeared in technical journals. The Nobel Prize in chemistry was awarded to Prof. F. Joliot and Mme. Irene Curie-Joliot for their synthesis of radioactive elements, working in the Curie Laboratory, Paris. Mme. Curie is the daughter of the late Pierre and Marie Curie.

Necrology. Holton, E. C., a famous paint chemist, died on November 30, at the age of 69; a charter member of the Cleveland Chemical Society; first chemist of the Sherwin-Williams Co.; during the World War adviser to the War Industries Board; in 1916 awarded the President's Prize of the Sherwin-Williams Co. for outstanding research work and developments on insecticides; author of many articles. Little, Arthur

D., (q.v.) born in Boston on Dec. 15, 1863; died on Aug. 1, 1935, at Northeast Harbor, Maine; chemical engineer of great distinction. Baker, John Townsend, born June 30, 1860, at Orange, N. J.; died Jan. 17, 1935, at Lake Wales, Fla.; a prominent chemical manufacturer; founded the J. T. Baker Chemical Co., Phillipsburg, N. J. Rockwood, Elbert William, born at Franklin, Mass., July 4, 1860; died July 17, 1935; Ph.D., Yale, 1904; professor of chemistry and toxicology, Iowa, 1888-1935; author of numerous papers in the field of physiological chemistry. Cohen, Julius B., (q.v.) born at Manchester, England, May 6, 1859; died in early June; distinguished teacher and author in the field of organic chemistry. Hooker, Samuel Cox (q.v.) born in England, Apr. 19, 1864; died at Brooklyn, N. Y., Oct. 12, 1935; Ph.D. University of Munich in 1885; chemist and technical expert in the manufacture of sugar; research organic chemist; author of numerous papers; noted for his work in the field of magic. Duisberg, Carl, (q.v.) died March 19 at the age of 73 in Leverkusen, Germany, a leader in the chemical industries of Germany. Jackson, Charles Loring, born in Boston, Mass., Apr. 4, 1847; died Oct. 28, 1935; member of the faculty of Harvard University for 44 years; distinguished organic chemist, author of numerous papers.

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CHEMISTRY, INDUSTRIAL OR APPLIED Two exceptions to the general discouragement during the depression are (1) the sound condition of chemical industries and (2) the advances in the field of research. According to the *Industrial and Engineering Chemistry* (October), business is better, despite handicaps and uncertainties which continue to hold it back. The third quarter of 1935 made the record of the year and, with every indication of increased operations in many plants drawing heavily upon the products of chemical industry, there is reason to believe that 1935 business will be the basis of real encouragement—the first for some time.

The Fifteenth Exposition of Chemical Industries was held in New York City from December 2-7. As reported in the News Edition of *Industrial and Engineering Chemistry*, the numerous visitors found convincing evidence that the chemical industries have maintained their traditional position in the vanguard of the parade of progress. Some 110,000 attended the exposition, where they examined the offerings of 254 exhibitors whose

booths tightly packed two full floors of the great building.

From the first glimpse the exposition was impressive, and in many ways the most outstanding of the series which was inaugurated in 1915. In early years these expositions were held annually, but more recently they have been held in November or December of the odd-numbered years. Those who have attended practically all the expositions were frequently heard to comment on the extent to which this, the fifteenth in the series, surpassed all previous shows for the artistic arrangement of the booths. Exhibitors made more effective use than ever before of backgrounds and draperies in arranging their displays, more regard was paid to artistic arrangements and, where appropriate, to modern decorative treatment. Many exhibitors were commended for the excellent way in which they had solved the dual problem of achieving a display which exhibited clearly the product and made a genuine artistic appeal.

Practically all of the many phases of the chemical industry were represented. These included the manufacturers of heavy chemicals, of synthetic organic chemicals, and various specialties; equipment of all descriptions used in the manufacture of chemical products, packages and containers for handling and marketing chemicals.

The features which attracted particular attention were far too numerous to list in detail here. As one went about the exposition it could be seen that the visitors were well distributed among all the booths, clearly showing that each held something important for a share of the audience. The American Chemical Society, with *Industrial and Engineering Chemistry* the immediate sponsor, presented the "Children of Recovery." These succeeded the "Children of Depression," which two years ago proved of such outstanding interest. Like them, the "Children of Recovery" were selected products of research parentage which in the past two years have made good commercially. Space made impossible the inclusion of all of the hundreds that had been suggested but those that were on display maintained the reputation of their predecessors as a centre of real interest.

The Chemical Exposition award was made to F. I. du Pont de Nemours & Company. This company has created vital industries in this country and was able to supply essential organic chemicals on which nearly every industry in the world is becoming increasingly dependent. Among the important productions is "Duprene" or synthetic rubber. Research with this end in view was started in the Organic Chemical Department of the du Pont Company about 10 years ago. The basic material is acetylene (C_2H_2). Father J. A. Nieuwland of Notre Dame University discovered a catalyst which serves to transform acetylene into divinylacetylene. The partial polymerization of this oil yields a synthetic drying oil ("S.O.D."). Many uses have been found for this oil. Thus, it protects equipment against corrosion.

Du Pont chemists converted monovinylacetylene into chloroprene (chloro-2-butadiene-1,3). Chloroprene polymerizes to form synthetic rubber of very high quality. They started with a large-scale pilot plant in 1931, which produced nearly 500,000 lb. in a three-year period. In 1934 the du Pont Company decided to erect a new plant, which is producing at the rate of about one million pounds per year.

"Duprene" is very resistant, especially to oily materials, which cause natural rubber to swell and disintegrate. It also stands heat better than natural

rubber, and also resists the action of acids and of alkalis. There is an increasing demand for the product.

The du Pont Company has also succeeded in producing camphor from turpentine, a hydrocarbon having the formula $C_{10}H_{16}$. A plant was completed and put into successful operation in 1934, which has an annual capacity of 1,500,000 lb. A highly refined product is obtained, superior to the synthetic material imported from abroad.

Hydrogenation of Coal. A completely new and most important British industry was started with the opening by Ramsay MacDonald of the coal hydrogenation gasoline plant of Imperial Chemical Industries at Billingham-on-Tees. This is particularly important because it can technically make Great Britain independent of imported oil supplies, with the exception of lubricating oil. At present it is making 4 per cent of the country's gasoline. Previously the experiment was being carried on in various countries, and received its first impetus after the world war with the growing spirit of nationalism, steadily mounting tariff barriers, and unrest in coal mines and heavy industries where there was much unemployment.

At present it is more expensive to produce gasoline from coal than to import it, so the Imperial Chemical Industries must be protected by means of tariffs. The process employed is this—add more hydrogen to coal, and adjust the oxygen content, for in oil the proportion of hydrogen is higher than in coal. Gasoline and gaseous hydrocarbons result. Dangerously high temperature and pressure must be used, and there have been many technical difficulties to overcome.

In Germany the Interessengemeinschaft is doing the same thing with lignite and it is given preferential treatment by the government. Great Britain uses bituminous coal and is the first to do so, while the U.S.A. employs petroleum. The British, German, and American concerns have pooled their patent rights and exchanged technical information through the formation of the International Hydrogenation Patents Co. Additional plants are being built in Germany, both for bituminous coal and lignite treatment.

The Billingham plant is intended to produce 150,000 tons of gasoline a year—50,000 to be made from coal or creosote oil and low-temperature tar, and the rest from bituminous coal. The normal rate of production is 410 tons of gasoline a day. A ratio of 4 tons of coal to 1 ton of gasoline can be maintained even without using creosote or low-temperature tar.

Metals. Recently there has been considerable interest in the metal, indium. It is being produced at the rate of 9000 oz. Troy per month. It is delivered in bars each weighing 2 oz. and the metal is of high degree of purity. A consistent mineral deposit containing indium has been discovered. Indium is purified by electroplating. It is used for plating and alloying. The metal sinks into the surface of copper or silver and both hardens and protects the surface. It also is used to improve dental gold.

According to *Science*, zinc and paint are chemically hostile to each other and that is why the average householder finds it so difficult and expensive to keep his zinc-coated eavetroughs decently painted up. Dr. Henry J. Wing, chemist at the works of F. I. du Pont de Nemours & Company, Wilmington, Del., reported an investigation in which he started with the commonly observed fact that paint flaking off zinc-coated metal is

covered on its contact side with a white film. Then he made the purest and smoothest zinc surface possible, by coating small pieces of glass on one side with zinc in the same way that aluminum is used to form reflectors for modern astronomical telescopes. These he exposed to fumes from ordinary paint. The same white stuff formed on the mirror surfaces. Upon analysis this was found to be zinc formate, a compound of zinc and formic acid. Analysis of the white stuff from "natural" paint flakes off the surface of galvanized iron showed the same substance to be present. Paint removed from plain iron did not have it. This solved the riddles, but the answer has not yet been forthcoming. Before paint chemists can know how to make paint stick to zinc further research will be necessary.

A study of a combination of silver and electricity to preserve fruit juices such as cider and grape juice is being made by Lawrence H. James and E. A. Beavens, of the U.S. Bureau of Chemistry and Soils, and was reported to members of the Society of American Bacteriologists. The method is similar to the sterilization of water in swimming pools by the use of colloidal silver. A small electric current is passed through a solution, which forces the silver into the juice so that when enough silver is present, it delays fermentation of the fruit juices.

Minerals and War. Sir Thomas Holland has written a book entitled *The Mineral Sanctions as an Aid to International Security*. According to Dr. William Cullen (*Chemistry and Industry*, Aug. 23, 1935, p. 778), if the scheme which Holland advocates had been adopted 12 months ago, neither Japan nor Italy would have been so "difficult." The British Isles are poorly provided with minerals, but the British Empire is very well off. The only serious deficiency is mineral oil. The U.S.A. is very favorably situated, but is almost entirely dependent upon foreign sources for chromite, manganese, nickel, tin, asbestos, tungsten, and, to a certain extent, bauxite. The British Empire and the U.S.A. combined control within their own borders something like 75 per cent of the metals and minerals which are required in war, but these same materials are also necessary for carrying on in peace. No nation could prosecute a war of any magnitude today without the certainty of a constant supply of certain essential metals and minerals. If, then, these supplies could be stopped, war could not be carried on. "In any case it can be assumed that if we and the U.S.A. could come to some arrangement whereby we jointly refused supplies to any disturber of the peace, then with this possibility ahead, nations would think twice before threatening war."

Petroleum Reserves of the United States. The Bergius process for the hydrogenation of coal is looked upon as possibly helping to provide a substitute for petroleum in the United States, when our supplies of oil have been exhausted. However, government statisticians, economists, and petroleum specialists in Washington feel that there is no danger of an imminent gasoline shortage in this country. With the discovery of new oil fields we should have on hand enough reserves to make our supply last a great deal longer than 13 years—a time limit once mentioned. Dr. Benjamin T. Brooks, chemical engineer, and L. C. Snyder, geologist, had predicted before the American Chemical Society, a serious petroleum shortage between 1940 and 1943. The United States consumes normally about one billion barrels a year and consumption

may rise. It is usually higher in the summer months.

As a member of the Petroleum Administrative Board said, "Sooner or later a substitute for natural petroleum as the principal source of motor fuel must be found, but what it is, or when it will be commercially practical, we don't know." Perhaps shale oil may be substituted if a more satisfactory and cheaper technical process can be found, or the hydrogenation of coal may be used.

Refining Lubricating Oils. A revolutionary process has been developed for the refining of lubricating oils. Formerly sulphuric acid, sodium hydroxide, and lead monoxide were the refiners' chemical standbys. According to *Chemical and Metallurgical Engineering* (May), within the past year 13 out of 21 solvent extraction plants were placed in operation, yielding 17,500 bbl. daily of a total of 23,000 bbl. of finished oil by these processes. The oil is of high quality and can be produced more economically. The solvents remove the "naphthenic" portions of the crude oil, leaving behind the "paraffinic" fractions. In 1934 the U.S.A. consumed 10,500,000 barrels of motor lubricants and 8,000,000 barrels of industrial lubricating oils—a total of 18,500,000 bbl., valued at about 120 million dollars.

Removing Salt From Sea Water. As reported in an editorial in *Chemistry and Industry* for May 24, one of the many remarkable scientific discoveries of the year was made in the Chemical Research Laboratory at Teddington, England. Sea water was converted into drinking water. This was done by passing the water through four tubes containing synthetic resins. The first and third tubes contained a resin prepared from formaldehyde and tannin materials; it removed the basic constituents of the sea salts. The second and fourth tubes were filled with a resin made from formaldehyde and aniline; it removed the acidic constituents which were formerly combined with the metals. The water issuing from the fourth tube was free from inorganic matter and drinkable, though not palatable without further treatment. It is probable that commercial application will be made of the process.

Selenium in Soils. According to Horace G. Byers and Henry G. Knight of the Bureau of Chemistry and Soils, U.S. Department of Agriculture, as reported in *Industrial and Engineering Chemistry* a new agricultural question has arisen in connection with selenium in soils. It has been shown that selenium is present in a wide variety of plants growing in certain soil areas, particularly in limited portions of the West. The element is present in plants in concentrations which range from traces up to quantities which are lethal to animals. In many cases the selenium produces chronic diseases which may ultimately cause death. They say: "It is true that quantities of foodstuffs have been produced and marketed and, unless preventative measures are taken, will continue to be produced and marketed. It seems, however, that no serious concern need be felt except in the areas concerned. In the general market it is improbable that any serious concentration of toxic food is likely to reach any individual. Within the toxic areas serious injury to stock raising has been encountered and human injury, especially to the young, may have occurred."

Wheat grown experimentally in selenium-bearing soils was found to be fatally poisonous to animals to which it was fed.

See FERTILIZERS.

CHESS. The ending of Dr. Alexander Alekhine's eight year reign as world's chess champion was accomplished during the year 1935. The over-turning of the champion was achieved by Dr. Max Euwe, of Amsterdam, who in a match of 30 games, played in Holland over a two month period, downed Alekhine, 15½ to 14½. Alekhine had won the title from José Capablanca in 1927 and had defended it successfully in previous years, but the mathematics teacher from the girls' school in Amsterdam proved the Russian's master. Dr. Euwe won 9 games, lost 8, and drew 13.

That the United States is now the ranking chess playing country was clearly shown again at the international team tournament at Warsaw where five Americans defeated 19 other nations for the Hamilton-Russell Trophy for the third consecutive time. The Americans won 17 matches and lost 2. Sweden was second in the team score, with Poland and Hungary third and fourth. The American team consisted of Reuben Fine, Frank Marshall, Abraham Kupchik, Arthur Duke, and Israel Horowitz. The Americans had previously won the Trophy at Prague and Folkestone.

Samuel Reschovsky, New Yorker, won the international masters' tournament at Margate, England, topping Capablanca and Sir George Thomas among others. Reschovsky also won the tournament at Great Yarmouth, where Dr. Adolf Seitz of Augsburg was runner-up. Fine, Duke, and Herman Steiner shared equally the first three prizes in the international tourney at Mexico City, with Capt. J. J. Araiza, Mexican champion, and Col. Manuel Soto Larrea fourth and fifth.

Dr. S. Tartakower, of Poland, won the international masters' tournament at Lodz. Fine was second with S. Kolski of Poland. K. Opocensky of Czechoslovakia was fourth. Duke won the Pacific Coast championship, defeating Steiner in a match at Los Angeles. Fine won the Western championship with Duke runner-up and Isaac Kashdan, New York State winner, third.

CHICAGO. See SEWERAGE AND SEWAGE TREATMENT; WATERWORKS; MUSIC; ILLINOIS.

CHICAGO, THE UNIVERSITY OF. An institution of higher education and research in Chicago, Ill., founded in 1890. The University is privately endowed, coeducational, and non-sectarian, although one-third of its 30 trustees must be Baptists. John D. Rockefeller founded the university and his personal gifts amounted to a total of \$35,000,000 over a period of 20 years. On Oct. 1, 1935, the members of the faculty, exclusive of assistants and of teachers in the laboratory schools, numbered 895. In all departments and in all grades of service the university employed approximately 3000 persons.

During the summer quarter, 1935, the enrollment was 4567, of whom 2118 were men and 2449 were women. In the autumn quarter, 1935, the total enrollment was 8225, a gain of 1 per cent over the same quarter of 1934. Of the total, 4525 were men and 3700 were women. In the college and upper divisions there were 2661 men and 1625 women; in the professional schools there were 1147 men and 668 women; and in University College downtown there were 695 men and 1373 women. Of the total enrollment, 1826 men and 1044 women were classified as graduate students; 1952 men and 1220 women were classified as undergraduate students; and 52 men and 63 women were classified as special students or students-at-large. Total enrollment for the academic year 1934-35 was 13,050. The Home Study, or correspondence de-

partment, had an average enrollment above 3500, which is exclusive of the totals given above. During the academic year the university granted 1654 degrees and 163 four-year certificates in medicine. Of that total 293 were Master's degrees and 186 were Doctorates of Philosophy. The total number of matriculants since 1892 approached the 175,000 figure.

The assets of the university as of June 30, 1935, amounted to \$110,500,222.11, an increase of \$143,027.73 over the figure for the same date in 1934. These funds were divided as follows: Endowment, \$59,478,903.79; plant, \$41,057,318.32; other funds, \$9,964,000.00. The total income under the university's combined budget for the fiscal year 1934-35 was \$7,345,537.02, an increase of \$479,657.12 over the expenditures of the previous year. The total amount of gifts paid in was \$1,859,339.04.

The University of Chicago Press published 52 books during 1935, in addition to 36 paper-bound pamphlets, 16 scholarly journals, and the annual proceedings of a number of organizations. Six one-reel sound films, designed as aids in the teaching of geology, directed by Dr. Carey Croneis of the university's geology department, were issued through the press during the year. These films are the second group of six produced by the University and Erpi Picture Consultants in the field of the physical sciences, as the first units of a project to produce teaching films in various fields.

Under the direction of Dr. A. H. Compton, university physicist, a renewed attack on the problem of cosmic rays was begun, which included the establishment of seven permanent cosmic ray measurement stations at various sites and the construction of a large electro-magnet for measuring the disintegration effects of the rays in a magnetic field. University chemists and obstetricians, working cooperatively, obtained in pure crystalline form the active principle of ergot, a drug useful in childbirth. A group of university biologists isolated the "bacterium necrophorum" as the apparent cause of chronic ulcerative colitis. A clinical psychiatric department was established in the university's South Side medical development. The university entered into a cooperative venture in educational broadcasting with Northwestern University and DePaul University, the joint project being embodied in the University Broadcasting Council.

The number of bound volumes in the university libraries rose to 1,112,000; periodicals currently received exceeded 5000. Under a foundation grant the university carried forward a large-scale programme of acquiring basic research documents in the social sciences, gathering public records of many American and Canadian local governments, increasing the map library to 80,000 maps, and adding subscriptions to 25 American and foreign newspapers. Experiment was undertaken with a view to the reduction of many types of documents to film form, and complete records of NRA and AAA hearings, totalling above 300,000 pages, were acquired in that form. A start was made in the building of a collection relating to Stephen A. Douglas, which is of particular interest in view of recent acquisitions of collections of Lincolniana. President, Robert Maynard Hutchins, LL.D.

CHILD, RICHARD WASHBURN. An American author and diplomat, died in New York, Jan. 31, 1935. Born in Worcester, Mass., on Aug. 5, 1881, he graduated from Harvard University in 1903 and from the Harvard Law School three years later. In 1924, Harvard conferred upon him the

degree of Doctor of Laws. Upon graduation, he began the practice of law and one of his first cases was acting as legal adviser to a group of engineers building a dam on the Mississippi River at Keokuk, Iowa. Along with his law practice, he devoted considerable time to writing, and his first novel, *Jim Hands*, was published in 1910. During the early part of the World War, Mr. Child served as a war correspondent with the Russian forces, and returning to the United States in 1917, became associated with Frank A. Vanderlip in his war finance work in the U. S. Treasury until 1918.

In the 1920 presidential campaign, he served Warren G. Harding, the Republican candidate as adviser, and in 1921, upon the election of Mr. Harding, was appointed ambassador to Italy. During his services in Italy he became the confidant of Benito Mussolini and assisted him in the preparation of his autobiography, which was published in 1927. For his services while Ambassador, Mr. Child was rewarded with the Order of St. Maurice and St. Lazarus, and the Order of the Crown of Italy. While at Rome he was appointed American observer at the International Economic Conference at Genoa in 1922, and in the same year was American delegate to the Conference on the Near East at Lausanne and represented the United States in the negotiations of the Lausanne Treaty. In the fall of 1923 he resigned, but at the request of the President, Calvin Coolidge, his resignation did not become effective until early in 1924.

Upon his return to the United States he continued his literary work, writing articles on world affairs for newspapers and magazines. In 1925, he founded the National Crime Commission to combat crime in the United States, which he believed was a menace more threatening than war. In 1932, Mr. Child, a life-long Republican, supported Franklin D. Roosevelt, the Democratic candidate for the presidency, serving as chairman of the Republicans-for-Roosevelt League. The following year he made application for a renewal of his license to practice law and opened offices in New York. In March, 1934, President Roosevelt appointed him special adviser to Secretary of State Cordell Hull, and he made a three months' tour of Europe investigating economic conditions.

Besides frequent contributions to magazines and newspapers, his published works included: *The Man in the Shadow* (1911); *The Blue Wall* (1912); *Potential Russia* (1916); *Bodbank* (1916); *Vanishing Men* (1919); *Velvet Black* (1920); *Fresh Waters* (1924); *A Diplomat Looks at Europe* (1925); *Battling the Criminal* (1928); *Writing on the Wall* (1928); and *Pitcher of Romance* (1930).

CHILD LABOR. The first nation-wide attempt to control child labor in the United States came to an abrupt end with the decision that the NRA Codes were unconstitutional. This event in effect returned the problem to the status characteristic at the beginning of 1933. At that time every effort was being made to force through State Legislatures the so-called Child Labor Amendment. The necessity for this was clearly apparent to the proponents of the measure from the fact that more than a century of reliance on State legislation as a means of protecting children from the hazards of industry had proved a failure. As late as 1935, 9 States, because of exemptions, permitted children under 14 years of age to work in factories; 8 States permitted children between 14 and 16 to work legal days 9 to 12 hours; 11 States allowed such children to work as late as 8 p.m. or after; and

34 States had practically no regulations regarding the employment of 16- and 17-year-old boys and girls in occupations recognized as hazardous.

The difficulty in hoping for complete success through the passage of legislation in the individual States is also clearly illustrated by the fact that whereas in the decade 1920-30 the number of children 15 years and under employed in the textile industry decreased 59 per cent, in two important southern textile States, South Carolina and Georgia, the number of children employed in textile mills increased 20 per cent in the decade specified. These children may, under the existing laws, work for 10 hours a day, six days a week. This is to say, the shift of an industry from one section of the country to the other can lead to the cancellation of gains made within the older industrialized States.

The success of Federal control through the child labor provisions of the NRA codes, which established a 16-year age minimum in most industries for full-time employment, an 18-year age minimum in certain hazardous employments and severely limited the outside of school hours permit to 14-year-old workers, illustrated to the proponents of a Federal constitutional amendment the necessity of achieving their objective. For example, the Pennsylvania Department of Labor and Industry in 1934 made a survey of the cotton garment industry in that State as it was operated under the NRA. It reported: "Only two children under 16 years were found at work out of 12,000 employees, and this in an industry where one worker in every 25 was under 16 years of age in 1932."

Child Labor Amendment. The Child Labor Amendment has thus far been ratified by 24 of the States: Maine, New Hampshire, New Jersey, Pennsylvania, West Virginia, Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, North Dakota, Arkansas, Oklahoma, Colorado, Wyoming, Montana, Idaho, Utah, Arizona, California, Oregon, and Washington.

During the month of February of the year 1935 a Special Committee of the American Bar Association issued a report in opposition to ratification. Although this may be taken as the official position of the principal legal organization of the nation, many distinguished lawyers have declared in favor of the amendment including Newton D. Baker, Paul D. Cravath, Manly O. Hudson, George Z. Medalie, Roscoe Pound, Samuel Seabury, Charles P. Taft, II, Allen Wardell. The opposition, however, includes a variety of groups—a notable number of newspapers, a large proportion of the principal spokesmen of the Roman Catholic Church, a majority of the associations of manufacturers, and educators like Nicholas Murray Butler. On the other hand, the amendment has the support of equally eminent persons in each of the groups specified, and of President Roosevelt. The present hope of the proponents of the measure is that it will be passed during 1937. See LAW.

Child Labor Flourishes. Children employed in the field of agriculture are especially numerous where such products as sugar beets (Colorado), onions (Ohio), small fruits and berries (Michigan, Oregon, Washington, and California), cotton (throughout the producing area), and vegetables for market are produced. Industrially, children find employment in textiles (Georgia, South Carolina, North Carolina, and Mississippi); young girls in hairdressing establishments, barber shops, etc.; and in the needle industries, especially shirts,

neckties, etc. (Connecticut, Rhode Island, Pennsylvania).

A special study made of the employment of children in the distribution and selling of newspapers and periodicals throws considerable light upon the nature of their activity in connection with an industry that employs large numbers, although part time. This study, which was made by the Children's Bureau of the U.S. Department of Labor, was concerned with employees under 16 years of age in 17 cities. More than 4000 children—1259 newspaper sellers and 830 carriers, and 1121 magazine sellers and carriers—were included; and the cities studied were in the South, Middle Atlantic, New England, Middle West, and Far West areas. While it was discovered that in most areas the age of the children engaged in this work has increased in the last decade, though slightly, the change was attributed chiefly to the fact that other employment opportunities for older boys were limited by the depression. How permanent this gain will be, therefore, is difficult to say.

In 1934, the newspaper sellers worked 156 hours per week, and the carriers, 10.3 hours per week. In general, the older the boys the shorter the hours and the higher the earnings. Boys under 12 earned a median of 82¢ and worked a median week of 17.8 hours; boys 12 and 13 earned \$1.30 a median week of 15.4 hours; and boys 14 and 15 earned \$1.82 for a median week of 15.4 hours. Only 7 per cent of the younger boys studied earned \$4 a week or more and 10 per cent of these were 14 or 15 years old. The practice of selling papers late in the evening is, the report says, on the decline, though it has not vanished. The study showed that 23 per cent of the boys stayed out until 10 p m on school days, and on Saturdays, 31 per cent.

For magazine sellers and carriers, the situation has changed for the worse in recent years, for the reason that larger numbers of children have been drawn into activity and instructed to carry on their solicitation in business places and restaurants. The tendency of the distributors is to employ large numbers of boys, thus cutting down the possible earnings. The report states that earnings were uniformly extremely low and the chief attraction was prizes offered, not cash. The periodical publishing companies are making some effort to improve the situation by instructing their agents to get the consent of the parents before making arrangements with children for selling.

NRA Termination. As we have remarked before, the termination of the NRA codes promised to cancel the gains made under them. Moreover, a study made by the National Child Labor Committee covering the years 1920 through 1934 illustrates that the employment of child labor is exactly correlated with the general state of employment in the manufacturing industries. The only exception to this rule is the period when the NRA codes were in effect and there was also a rise in general employment. The Committee suggests that with the general improvement in employment conditions without legal safeguards, the number of children actually employed will increase.

As to the volume of child labor, there was considerable variation among the States. In New York but 1.6 per cent of the children in the young age groups were employed and it is expected that the number will be still further reduced by a new State law which comes into effect in 1936. There are seven States with somewhat better records than New York, or with less than 1 per cent of their children employed. On the other hand, there

are seven States at the other end of the scale ranging from Louisiana with 10 per cent of its children employed to Mississippi, with 24.9 per cent.

Working Permits. In New York City, the effect of the NRA decision is illustrated by the fact that full-time working permits were granted to 1428 children between 14 and 15 during September, 1935, as contrasted with 390 in 1934. Students of the subject emphasize, however, that the full effect of child labor can not be measured by the numbers actually employed in industries where working cards are required, for the reason that industrial home work is engaged in by children almost as frequently as by adult women. They also point out that children, like women, are at once the victims of and the cause of low wages, and therefore are an important factor in pulling down wages of all persons employed. In a period when employment opportunities are severely limited, and competition for jobs is keen, the children, like the women, are drawn into industry in increasing numbers even though men can not find work. In spite of this, the number of children on relief is large, and the number of young boys and girls who have come to the working age during the depression who have never found jobs, is an important factor in keeping the total number of unemployed at a high level in the nation.

CHILD WELFARE. Children on Relief. A significant aspect of child welfare is the number of children on relief. A study of the Federal Relief population, as of May, 1935, revealed that at a time when every seventh person in the United States was on relief, every sixth person on relief was a youth, i.e., was between 16 and 24 years of age. Moreover, two out of every five youths on relief were found to be in rural areas and of 25 youths on relief 21 were found to be white and four colored. In terms of numbers it was disclosed that two-fifths of the persons receiving Federal aid were under 16 years of age. A statement made by Katherine F. Lenroot, Chief of the U.S. Children's Bureau, reads:

With the average amount of relief per family per month as low as \$8.23 in the State with the lowest average, and rating only \$42.36 in the State with the highest average, it is obvious that the health and welfare of these children are in serious jeopardy. These children have a right to expect that the Federal, State, and community relief policies of 1935 will provide more adequately for essential items in the family budget.

In this connection, a report made to the Board of Education of New York City at about this same time revealed that 18 per cent of the city pupils lacked proper food—a total of 135,000 individuals. The Borough of Manhattan where many thousands of youngsters are jammed into congested, poverty-stricken, areas on the east and west sides and in Harlem, shows the highest ratio of malnutrition—23.8 per cent; the Bronx follows with 20.8 per cent. This represents a general increase of 25 per cent in the ratio of malnutrition since 1929.

Dependent Children. Provision for the care of dependent children is an integral part of the so-called Social Security Act passed by Congress in 1935. In connection with the preliminary studies being made preparatory to the putting of the Act into operation during 1936, the Federal Emergency Relief Administration published a "Digest of state and territorial laws granting aid to dependent children in their own homes as of November 1, 1935." Selecting six States at random, a general picture of the present legal status of this particular aspect of child labor will be obtained.

Maine. Under a mandatory law of 1933, mothers with children under 16 years of age who have resided in the State for five consecutive years previous to the application and who need and desire aid to enable them to maintain themselves and children in their homes and are mentally, morally, and physically fit to bring up the children in suitable surroundings are entitled to aid if they have been deserted for one year or if the husband has willfully refrained from supporting the mother and the children. The amount granted is not specified by law; the duty of investigating the case and granting an allowance is lodged in municipal boards under the supervision of the State Department of Health and Welfare; and the funds are charged 50 per cent to the State and 50 per cent to the municipalities.

New York Under the New York law governing this type of relief, children under 16 in the charge of the mother or of a relative within the second degree of either the father or mother, the persons in charge meeting the specified requirements as to citizenship and residence, are entitled to a grant of an amount not specified but described as adequate to enable the mother or relative to bring up the children properly. Direct responsibility for the administration of this aid is lodged in county boards of Child Welfare with certain exceptions for large municipalities, under the supervision of the State Department of Social Welfare; and funds are provided by the counties or cities making the grants.

Georgia No provision.

Wisconsin Under the Wisconsin law, children under 16 in charge of a mother or stepmother or person standing *in loco parentis* are eligible for a grant of an unspecified amount but described as sufficient for the purpose. Under the law the grant is made by the juvenile or county court and supervision over administration of the Act is lodged in the State Pension Department. The counties are responsible for two-thirds of the grant, the remaining one-third coming from the State.

Colorado Under the laws of Colorado, children under 18 years of age in charge of parent or parents, poor and unable properly to care for the children, are eligible for grants sufficient to enable the parents properly to care for them, on application to county juvenile courts. This relief is under the general supervision of the State Public Welfare Department and the funds are to be provided by the counties.

California Under the laws of California, children 16 years of age and in charge of parents or persons normally caring for the child, whether orphaned, half orphaned, abandoned, or otherwise deprived of parental support, are eligible for an allowance to a maximum amount of \$120 a year from county or city boards of public welfare, or at the discretion of the children's agents of the State Department of Social Welfare. This \$120 grant is subject to reimbursement by the State through the Department of Social Welfare and may be increased by an equal sum at the expense of the county or town asking such action.

This foreshortened description gives a general idea of the variety of legislation covering this particular matter. Under the Social Security Act (Public, 271, 74th Congress) it is purposed to secure as much uniformity in it as is possible. Among the Federal requirements are that the State plan be State-wide, and, if administered by political subdivisions be mandatory upon them. Financial participation by the State must be provided in the State plan, and a single State agency must be charged with the administration and supervision of the activity. An additional significant provision is that the State residence requirement may not be such as to deny aid to any child residing in the State and who has resided therein for one year immediately preceding the application for aid.

Legislation. A review of the legislative acts having to do with children during 1934, made by the Children's Bureau of the U.S. Department of Labor, revealed that relatively little attention was devoted to children's problems during the year. Among the subjects which were acted upon were the laws increasing the penalty for kidnaping and similar offenses in Massachusetts, Ohio, South Carolina, Virginia, Washington, and West Virginia. Wisconsin raised from 16 to 17 the minimum age at which unaccompanied children may attend public dances; while Iowa, Kansas, and Michigan liberalized allowances for maternal and child

health in the case of indigent persons. A number of States also passed legislation having to do with adopted children, generally seeking to regularize and make a proper record of the action and to control the placement and adoption by requiring that child placing agencies and maternity homes be licensed and subject to supervision. In connection with the maternity homes, several States passed laws prohibiting advertising children for adoption or placing, and three States prohibited such activity entirely.

National Youth Programme. The general recognition on the part of the relief authorities of the inadequacy of relief allowances, as instanced by such reports as that made to the Mayor of New York City by a special investigatory committee, had not led to any material change in the size of the allowances, since all gains in appropriations have, in effect, been canceled by the constantly increasing number of persons applying for aid. However, outside of the immediate home relief field, considerable attention has been paid to the problems of youth, including the continuation and enlargement of the Civilian Conservation Corps and the establishment of the National Youth Administration. The National Youth Administration, an institution established under the so-called Works Program of 1935, took as its chief task the subvention of needy students already registered in high schools, colleges, and universities. It also made a grant of funds for the support of apprentices in charge of the regular national service in this field. The N.Y.A. grants were, according to the admission of the Administrator of this organization, Mr. Aubrey Williams, not only inadequate in amount, but were insufficient in number properly to meet the problem.

Under the Works Program, the CCC was markedly expanded, the objective being the enlistment of 600,000 boys, or double the number absorbed by the programme in its earlier phases. The work done by the boys will remain essentially what it was in its earlier phases, which is to say, that it will consist of soil erosion prevention, the planting of trees on areas designated for reforestation, the fighting of tree-destroying diseases, the building of forest trails, the digging of mosquito-control ditches, and so on. This phase of the relief programme has, according to official statements, won more general approval than any other. The criticism to which it has been subjected, and which has had official recognition, has been chiefly of its semi-military phases. While in official intent an effort to provide a healthy environment for youths from relief families, and useful work for them to do under disciplinary conditions intended to be liberal, the fact that the camps established have been in charge of military men designated by the War Department, has aroused some suspicion. A sympathetic critic, Jonathan Mitchell, has written in the *New Republic* for June 12, 1935.

Most people who have had anything to do with the CCC wish it to be made permanent, and talk of William James' moral equivalent of war. Nevertheless democratic institutions are probably best preserved when adolescent youths remain within the family system, and woo girls of their own fancy and plan for families of their own. Camps might perhaps be founded by the Government for boys who wish to make forestry a career. With this exception, the less this country does to prolong the gang age of its youth the better.

Nevertheless, this statement overlooks the fact that studies of demobilized CCC boys, made at the request of the CCC administration by the Federal Emergency Relief Administration, indicate that while some preference is given to such boys by

private employers, their experience in obtaining jobs has not been materially better than those of boys in general. This is simply to say, that while, on the one hand, the CCC camps are obviously no final solution for the problem of unemployed youths in that they are blind alleys, neither is there much evidence that the young can expect to be freely absorbed into normal employment in the immediate future.

Unemployed Youth. This brings to the fore the fact that, as the National Industrial Conference Board pointed out during the year, there is an annual net increase of approximately 320,000 new workers per year, or in the six years of the depression an increase of close to 2,000,000 individuals.

The problem of an unemployed youth is worldwide. According to a study released by the International Labor Office, one-fourth of the unemployed in Germany in 1932 and in Denmark in 1933, and one-third of those in Sweden in 1933, were under 25. The German figures total 1,750,000. Italy in the same year had 250,000 unemployed under 18, and Great Britain in May, 1933, had 140,000 under that age. In the light of this it is interesting to note that considerable attention has been concentrated on special projects for the young unemployed. This included vocational guidance, vocational training, and voluntary work service. In an attempt to control the situation, also, efforts have been made quite generally to raise the compulsory school age and the minimum working age.

The experiment in vocational guidance has been elaborate in England and Germany, and has been chiefly organized around the effort to introduce new workers to industrial processes through visits to actual operating establishments, the use of motion pictures, and so on, with the idea of facilitating choice of employment. This technique has been used because of the discovery by specialists, that many unemployed youths lack any notion of what they wish to do should work be offered. They thus tend to become casual laborers. Vocational guidance has also been made necessary by the fact that there are observable abnormal trends of interest in given occupations, some of which are known by statistical analysis to be overcrowded already. In this connection it should be noted that European countries have a more exact knowledge of this subject than is available in the United States. With regard to vocational training the emphasis has been placed upon domestic service and agriculture in recent years, the feeling being that the former is at least a preparation for possible future marriage, while the latter is in line with "back to the soil" movement which is common in Europe to-day.

It should be pointed out that an integral part of youth activities—though perhaps dubiously child welfare activities—are such movements as that in Germany to organize young people, male and female, into labor groups for work in agriculture and on the public roads, the professed objective being the democratization of youth in Fascist terms, though more candid spokesmen for the Government have admitted that, in the case of boys, it is a preliminary "toughening" process looking toward their period of military service. In this connection it should be observed that in an effort to redistribute employment, young unmarried workers have been deprived of their jobs by decree and replaced by older married workers. In Italy the same organization of youth into formal Fascist youth organizations is going on. The equivalent movement in Soviet Russia, the young communist organizations,

is only similar by analogy, the intent being different: The imbuing of the youth with the general idea of social welfare, and a high conception of the service of the masses by the individual.

CHILE, ché'la, or chil'i. A South American republic. Capital, Santiago.

Area and Population. Chile has an area of 285,133 square miles and a population estimated on Jan. 1, 1935, at 4,465,000 (4,287,445 at the 1930 census). The leading cities, with their 1930 census populations, were: Santiago, 696,231; Valparaíso, 193,205; Concepción, 77,589; Antofagasta, 53,591; Viña del Mar, 49,488; Iquique, 46,458. The population is predominantly European. Living births in 1934 numbered 150,362 (147,723 in 1933); deaths, 119,080 (118,432); marriages, 31,017 (29,562).

Education. Elementary education is free and compulsory for children between 7 and 15. In 1933 there were 487,751 pupils in 4060 public and private primary schools; 950 students in 7 normal schools; 37,505 pupils in 206 secondary schools, and 3517 pupils in 11 public commercial schools. For higher education there were the State University, the Catholic University, and the National Institute at Santiago and the University of Concepción, besides various professional and vocational schools.

Production. Of the working population in 1930, 37.8 per cent were engaged in agriculture and 22.1 per cent in industry. The position of agriculture improved markedly in 1934, the crops being good and exports 63 per cent greater in value than in 1933. The 1933-34 crops included (in metric tons): Wheat, 960,900; barley, 146,400; oats, 114,400; potatoes, 611,300. Corn production in 1932-33 was 82,500 metric tons; wine in 1933-34, 3,200,000 hectoliters; tobacco (1932), 10,212,140 lb. The 1934 wool clip was 15,400 metric tons. There were 2,462,730 cattle in 1935 (2,387,940 in 1930).

Minerals normally account for about 85 per cent of the value of all exports. Exports of nitrate, long the dominant factor in Chilean economy, increased to 1,256,000 metric tons in 1934 from 669,000 in 1933. The value of 1934 nitrate shipments was 140,538,000 gold pesos (85,000,000 in 1933). Output of other minerals in 1934 was (in metric tons): Copper, 256,700 (163,400 in 1933); coal, 1,804,000 (1,538,000); iron ore, 973,000 (565,000). The 1934 gold production was 7420 kilograms (4584 in 1933); silver, 32,750 kilograms (7750 in 1933). The expansion of Chilean industry continued at a rapid rate during 1934, with many new lines being established.

Foreign Trade. Imports in 1934 were valued at 241,600,000 gold pesos (181,600,000 in 1933) and exports at 496,600,000 gold pesos (344,000,000 in 1933). Imports increased 33 per cent in value over 1933; exports, 44.4 per cent. The United States supplied 28.8 per cent of the 1934 imports (22.5 in 1933); Great Britain, 23.2 per cent (12.2); Germany, 10.2 (11.4); and Peru, 8.8 (14.2). Of the total exports, Great Britain took 22.8 per cent (24.8 in 1933); United States, 20.9 per cent (17.0); and Germany, 5 (6.7). The value of the principal 1934 exports was (in 1000 gold pesos): Copper bars, 183,623; sodium nitrate, 140,538; wool, 32,049; gold ores, 8937; iodine, 9011; untanned hides, 8104; barley, 8007. Sugar, wheat, textiles, fuel oil, etc., were the principal import items.

United States statistics showed imports from Chile in 1935 of \$24,091,023 (\$22,909,616 in 1934) and exports to Chile of \$15,948,889 (\$12,030,334 in 1934).

Finance. According to the report of the Comptroller General, dated Feb. 1, 1935, ordinary budget

receipts during 1934 totaled 1,043,000,000 pesos and expenditures 974,900,000 pesos, leaving a surplus of 68,100,000 pesos. Comparative returns for 1933 were: Receipts, 945,959,167 pesos; expenditures, 944,127,513 pesos; surplus, 1,831,654 pesos. Both the 1933 and 1934 figures exclude the extraordinary budget and appropriations under special laws, which amounted to 141,600,000 pesos in 1933. Actual preliminary budget returns for 1935 were: Receipts, 1,380,000,000 pesos; expenditures, 1,280,000,000 pesos. The 1936 estimates balanced at 1,291,000,000 pesos.

The public debt as of Dec. 31, 1934, totaled 5,318,801,639 pesos, against 5,372,117,146 pesos on Dec. 31, 1933. The gold peso exchanged at \$0.1217 in 1932, \$0.15 in 1933, and \$0.2063 in 1934.

Communications. Chile in 1935 had a little over 5500 miles of railway lines, of which about 3600 miles were state owned and operated. A new railway from Antofagasta, Chile, to Salta, Argentina, was begun in 1935. The Chilean section of the Transandean Ry., operated as a private line since 1910, was incorporated in the state system in August, 1934, due to financial difficulties. The state lines reported a deficit of 11,000,000 pesos in 1934, but this included a contribution of 19,000,000 pesos made to the government. Operating receipts were 8,000,000 pesos more than actual operating expenditures. Highways totaled 25,000 miles, including about 16,000 miles fit for motor traffic. Air lines connect Santiago with the chief Chilean cities and with the inter-American air network. The regular air service maintained by the Junkers company between Berlin and Rio de Janeiro was extended to Santiago, Chile, in October, 1935. The net register tonnage of overseas shipping entering the ports with cargo in 1934 was 1,491,000 (1,298,000 in 1933); tonnage cleared, 1,839,000 (1,450,000 in 1933). The Chilean merchant marine in December, 1934, consisted of 108 ships of 146,752 registered tons.

Government. By the 1935 Constitution, executive power is vested in a President, aided by a cabinet responsible to him. The legislative function is exercised by a National Congress, consisting of a Senate of 45 members elected for eight years and renewed by halves every four years, and a Chamber of Deputies of 142 members elected for four years by departments. The President, chosen for six years by direct popular vote, is ineligible to succeed himself. President in 1935, Arturo Alessandri, who assumed office Dec. 24, 1932.

HISTORY

Political Trends. Chile's progress in both the political and economic fields was continued during 1935. The revival of economic activity, which first became apparent in 1933, gained added momentum. The index of industrial activity (Base: 1929 equals 100) increased from 95.8 for 1933 to 105.1 for 1934 and to 119 for the year 1935. The general improvement in almost all lines of business was accompanied by the further stabilization of the internal political situation. The astonishing series of revolutions which racked the Chilean body politic during 1931-33 was apparently ended, and the political parties resumed their customary manoeuvring and bickering within the constitutional sphere. The sweep of communistic and ultra-radical propaganda, which had threatened to overwhelm the powerful land-owning aristocracy and the middle class, appeared to have been definitely checked.

With the decline of the radical menace, the coal-

tion of the conservative and liberal parties upon which President Alessandri's power rested began to disintegrate. The Radical party, which had the largest representation in the Chamber of Deputies (37 out of 142 seats), went over into the Opposition early in the year. The party's decision to file charges against Minister of the Interior Luis Salas Romo led the President about February 15 to prorogue the extraordinary session of Congress. Fears that another period of political confusion was impending were set at rest on March 21 when the Conservative, Democratic, and Liberal parties, controlling a majority of one in the Chamber, formed a bloc to support the Alessandri administration.

The new bloc's programme, designed to eliminate social unrest among Chile's large propertyless working classes, called for government support of new fishing and other enterprises, the construction of hygienic but economical houses for the needy, and the reduction of tariff rates on many articles consumed by the masses.

The agricultural colonization law, promulgated Feb. 16, 1935, was an important step in the same direction. It provided an Agricultural Colonization Fund, operated through an autonomous institution capitalized at 100,000,000 pesos, to acquire farm lands through direct purchase, public auction, or even expropriation, for settlement by the landless and unemployed. Landed estates not kept in a reasonable state of production were declared subject to expropriation at a price not to exceed 10 per cent of the assessed value. The President was authorized to transfer to the Colonization Fund such public lands as he considered desirable for settlement. The lands acquired were to be distributed in tracts ranging from 4 to 500 hectares (hectare equals 2.47 acres). The value of each farm, including a home, was not to exceed 50,000 pesos. Settlers were to receive full title to their tracts upon payment of 5 to 10 per cent of the purchase price, with generous repayment provisions. The President was authorized to float an internal loan of not more than 300,000,000 pesos to finance the plan.

Another law of July 26 granted a 25 per cent increase in salaries of government employees for the years 1935 and 1936, thus increasing the budget by about 42,000,000 pesos annually. Autonomy of the municipalities was restored throughout Chile simultaneously with the municipal elections of April 7. Under a law adopted in 1934, literate females over 21 years of age and all foreigners who had resided in a municipal area for five consecutive years were permitted to vote in the municipal elections.

A proposal for nationalization of all electric utilities and industries in Chile, under consideration by Congress, received a strong impetus from the lawsuit brought by the Fiscal Defense Council on behalf of the government against the Chilean Electric Company, a subsidiary of the Electric Bond and Share Company of New York. The company was charged late in October with violating the laws restricting the purchase and exportation of foreign currencies. On November 28 it was reported that a settlement had been reached, the company having accepted closer Chilean control.

Congress was convoked in extraordinary session at the end of October by President Alessandri to consider the 1936 budget, determine the date for the next election, and pass upon government bills for the extension of the land distribution programme and additional social welfare projects. A

law proclaimed November 7, designed to check fast-growing Fascist and Communist semi-military organization, prohibited the wearing of distinctive insignia and uniforms in public. However the Chilean Supreme Court on November 20 declared this law unconstitutional. Jorge González, leader of the Chilean Nazis, was sentenced to prison for 61 days on November 12 following his conviction on a charge of libeling the editor of *La Nación*. On November 28 the next parliamentary elections were set for March, 1937.

The international agreement, regulating the production of both natural and synthetic nitrate, was extended for three years from July 1, 1935, through a pact ratified in London on September 9. Chile was authorized to market between 1,000,000 and 1,250,000 tons of nitrate annually for three years. It was estimated that the agreement would bring Chile a gross profit of £2,500,000 during the season ending in June, 1936.

Financial Problems. The Exchange Control Commission continued its activities, as the expansion of Chilean exports did not yet suffice to meet all Chile's requirements for foreign exchange. American frozen credits in Chile as of Aug. 1, 1935, were estimated at 57,000,000 pesos, the government having granted no exchange for the liquidation of these credits. On Jan. 31, 1935, the government decreed the partial resumption of payments upon the defaulted foreign debt. The decree allotted government revenues from the Nitrate and Iodine Sales Corp. and from taxes on the copper mines to the Public Debt Amortization Bureau for disbursements on the public debt, thus making the amount available for service of the debt dependent upon foreign purchases of nitrate, iodine, and copper. The sums available in 1935 permitted the payment of interest at the rate of about $\frac{1}{2}$ of 1 per cent. Foreign bondholders accepting this sum automatically relinquished all claims to further interest payments on coupons on which the reduced interest had been paid. This and other features of the scheme aroused much protest among foreign bondholders. Late in February a Chilean financial mission arrived in the United States to promote the acceptance of the plan. Negotiations were still proceeding at the end of the year. As of Dec. 31, 1934, all of the \$264,608,500 in bonds of the Chilean Government and its subdivisions held in the United States were in default in both interest and sinking fund payments.

Foreign Affairs. One of the most interesting developments of the Chaco War was the manner in which Chilean public and governmental sentiment, at first overwhelmingly favorable to Paraguay, gradually swung over to the Bolivian side. In 1935 the Bolivian-Chilean rapprochement had gone to such lengths that there was talk of the formation of a Pacific bloc, including Chile, Bolivia, and Peru, in opposition to Argentina and Paraguay. Such a movement was actively promoted by the Bolivian Foreign Office.

Chile had watched Argentine policy in the Chaco struggle with increasing suspicion, fearing that the net result would be the extension of Argentine economic, if not political, control over the disputed territory. This latent irritation was exposed in March when Argentine protests at the Chilean Peruvian economic accord of 1934, accompanied by threats of reprisals if the treaty was ratified, provoked sharp criticism of Argentina's Chaco policy from both President Alessandri and the influential Augustin Edwards, former Chilean Ambassador to Great Britain. Immediately afterwards

President Alessandri announced that the time was not ripe for the Argentine President's projected visit to Chile, a visit which had been suggested by the Chilean Government itself.

Despite this outburst, cordial relations with Argentina were soon reestablished and the Chilean Foreign Office participated actively in the negotiations which led to the truce of June 12, 1935, between Bolivia and Paraguay. Chile did not abandon its commercial treaty with Peru, which was ratified Nov. 16, 1935. Instead Chile's rapprochement with its old enemy in the War of the Pacific was carried still further by the signing on July 6, 1935, of six conventions, regulating the civil rights of their respective nationals, propaganda, and census methods, and providing for the exchange of university professors and students. On July 2, at Buenos Aires, Chile signed 10 bilateral conventions with Argentina. See ARGENTINA, BOLIVIA, and PERU under *History*.

CHINA. A republic of eastern Asia. Capital, Nanking.

Area and Population. With an area estimated at 4,314,097 square miles, or roughly equal to that of the United States and Mexico combined, China and its dependencies contain about one-fourth of the world's population, or roughly 450,000,000 people. These estimates include regions such as Outer Mongolia, Manchuria, and Tibet, over which China no longer exercises actual control. (See MANCHOUKUO, MONGOLIA, and TIBET.) For the estimated area and population of the Chinese provinces in 1930, see the 1934 NEW INTERNATIONAL YEAR BOOK, p. 142.) Estimated populations of the chief cities in 1931 were: Shanghai, including suburbs, 3,259,114; Tientsin, 1,387,462; Canton, 861,024; Hankow, 777,993; Chungking, 635,000; Nanking, 633,452; Wenchow, 631,276; Changsha, 606,972; Hangchow, 506,930; Weihaiwei, 390,337; Foochow, 322,725; Soochow, 260,000; Amoy, 234,159; Ningpo, 218,774; Wanhhsien, 201,837; Chinkiang, 199,776. The number of Chinese residing abroad was estimated in 1934 at 11,393,636, including 3,400,000 in Formosa, 2,000,000 in British Malaya, and 1,233,855 in Netherland India.

Buddhism, Taoism, and Confucianism are the predominant religions. There are also about 20,000,000 Mohammedans, 2,486,000 Roman Catholics, and 807,000 Protestants.

Education. Illiteracy in China is widespread. In 1932 there were 190,985 kindergartens and elementary schools, with 7,937,558 pupils and 407,044 teachers. Middle schools numbered 2337, including 1475 public schools with about 515,000 pupils. There were 52 universities in 1933 (14 national, 13 provincial, and 25 private) and the attendance in 1931 was 25,018. In 1933, 621 Chinese students were attending foreign universities.

Production. About 80 per cent of the population is engaged in agriculture. China ranks first in the production of rice, soy beans, tea, kaoliang, sweet potatoes, millet, and vegetable oil, second in the production of raw silk, and about third in the production of wheat and cotton. Sugarcane culture has made rapid progress in Kwangtung and Kwangsi Provinces. There are no accurate production statistics, but official estimates for 1933 were as follows (in metric tons): Wheat, 23,795,000; rice, 52,072,000; soy beans, 9,993,000; barley, 6,381,000; corn, 6,931,000; ground-nuts, 2,615,600; tobacco, 208,000; hemp, 110,600; linseed, 53,500. Cotton production in 1934-35 was estimated at 2,800,000 bales (of 478 lb. net). Exports of raw silk in 1934 were estimated at 3,127,000 metric tons.

China is also the world's leading exporter of eggs and pigs' bristles. Livestock estimates for 1933 were: Swine, 94,343,894; cows and buffaloes, 22,246,555; goats and sheep, 19,418,241; horses, 6,089,463.

A leading producer of antimony, tin, tungsten, and manganese, China also has extensive coal and iron deposits and commercially important supplies of salt, petroleum, wolfram, molybdenum, bismuth, gold, and silver. The latest mining and metallurgical production figures, excluding Manchuria, are (in metric tons): Coal, 18,685,000 (1932); coke, 18,000 (1933); manganese ore, 9600 (exports, 1933); iron ore, 1,300,000 (1932); pig iron, 115,000 (1932); steel ingots and castings, 15,000 (1931); lead, 3100 (1932); zinc, 4400 (1932); tin, 7700 (1934).

Manufacturing in China has undergone a steady expansion. The cotton textile industry is the most highly developed. In 1934 there were 127 modern cotton spinning and weaving plants, with a total of about 4,500,000 spindles and 42,000 looms. The annual production of these mills averaged about 2,250,000 bales of cotton yarn and nearly 23,500,000 pieces (of 40 yards each) of cotton cloth. In 1934 the mills consumed about 2,150,000 bales of raw cotton. There were also some 91 flour mills, 400 glass factories, 518 electrical factories, 11 cement works, 104 tanning factories, as well as iron foundries, shipyards, railway shops, cigarette factories, silk filatures and looms, rubber-shoe factories, and printing and publishing plants.

Foreign Trade. Excluding Manchuria, China's imports in 1934 were valued at 1,029,665,000 yuan (1,345,567,000 yuan in 1933) and exports at 535,214,000 yuan (611,828,000 yuan in 1933). The United States in 1934 continued to hold first place in China's import and export trade. The American share of China's imports, 26.16 per cent, was more than twice that of Japan and Great Britain, with 12.21 and 12 per cent, respectively, and nearly three times that of Germany, with 8.99 per cent. Of China's total exports, the United States bought 17.63 per cent, compared with Japan's 15.16 per cent, Great Britain's 9.30 per cent, and Germany's 3.58 per cent. Metals and ores, raw cotton and yarn, machinery, chemicals, wool and woolen goods, dyes and paints, tobacco, and cotton piece goods are leading imports. The chief exports, in order of their 1934 values, were: Animal products; tea; oil, tallow, and wax; metals and minerals; cotton piece goods; oil seeds; hides, skins, and leather; and raw silk.

Imports in 1935, excluding precious metals, totaled about 919,000,000 yuan and exports were 576,000,000 yuan. The United States supplied 17 per cent and Japan 15 per cent of the imports, while the United States took 23.7 per cent and Japan 14 per cent of the exports. United States statistics for 1935 showed general imports from China of \$64,164,486 (\$43,932,503 in 1934) and exports to China, including reexports, of \$38,156,292 (\$68,666,930 in 1934).

Finance. The budget of the Central Government at Nanking for the fiscal year ending June 30, 1936, as adopted by the Legislative Yuan, balanced at 957,000,000 yuan. The chief expenditure items were (in millions of yuan): Military, 321; loan service obligations, 275; subsidies, 102. According to the Ministry of Finance there was a deficit of 86,000,000 yuan on total receipts of 672,000,000 yuan in 1932-33 and a deficit of 147,000,000 yuan on total receipts of 829,000,000 yuan in 1933-34.

The consolidated public debt of the Central

Government outstanding on Jan 1, 1934, was distributed as follows: Internal, 816,003,845 silver dollars; external, £17,781,952, 75,600,000 yen, 52,366,975 francs, 137,743,000 Belgian francs, 30,750,000 guilders, 2,334,598 U.S. dollars, and 8,645,425 silver dollars (yuan). Abolition of the tael as a unit of currency in 1933 left the silver dollar (yuan) as the exchange unit. The yuan, with no fixed par value, exchanged at an average of \$0.2860 in 1933, \$0.3409 in 1934, and \$0.3657 in 1935.

Communications. The modernization of China's antiquated system of communication and transportation proceeded at a rapid pace during 1934 and 1935, despite the country's political and economic difficulties. During 1934 more new railway construction was completed or undertaken than in any year during the previous 20-year period. The Lunghai Ry. of North Central China was extended to Sian, capital of Shensi Province. Operations were resumed on the Peiping-Mukden line for the first time since 1931. Work was approaching completion on the Hankow-Canton and Hangchow-Ningpo lines and on other lines connecting Shanghai with the Hankow-Canton lines and linking Nanking with Foochow. Other railway lines projected or in preliminary stages of construction were: Chungking-Chengtu, Nanchang-Pingsiang, Canton-Hohsien, Chengtu-Sian, Sian-Lanchow, Samshui-Wuchow. Development of the new port of Lien-Yan-Kang, eastern terminus on the Yellow Sea of the Lunghai Ry., also was progressing.

Highway construction was proceeding much more actively than railway building. During 1934 the Central Government constructed about 2500 miles of surfaced roads and 4000 miles of dirt roads. An additional 10,000 miles of new highways were constructed by provincial authorities, bringing the total highway mileage suitable for motor traffic to 50,000 miles. Aviation also made remarkable progress. Commercial lines in operation at the beginning of 1935 aggregated more than 6800 miles, of which nearly 4000 miles were operated by a Chino-American company using American planes and pilots. In August, 1935, the Canton-Hainan air line was extended to Nanchang, capital of Kwangsi Province. The Chinese Radio Administration inaugurated domestic radio-telephone service on Oct. 10, 1935; subsequently radio-telephone connections with Japan, the United States, and Europe were established. A 10,000,000-yuan loan for improvement of the telephone and telegraph systems was approved by the Executive Yuan in 1935. During 1934 a total of 72,913 vessels of 44,918,927 register tons entered and cleared the ports in the overseas trade. The rivers and canals still remain the principal means of transport in the interior.

Government. The Nanking or Nationalist Government, which in 1935 had control of a large part of Central China and the lower Yangtze valley, represented a Kuomintang (Nationalist party) dictatorship. Executive control, however, rested mainly in the hands of Gen. Chiang Kai-shek, commander-in-chief of the Nationalist armies. Pending the projected establishment of representative government, governmental functions were carried on by means of a committee system (for description, see 1932 YEAR BOOK). The chairman of the State Council and nominal head of the government in 1935 was Lin Sen. The chairmen of the five yuan (committees) of the government were: Executive, Wang Ching-wei; Legislative, Sun Fo; Judicial, Chu Cheng; Examination, Tai Chi-t'ao; Control, Yu Yu-jen. The chairman of the Execu-

tive Yuan was assisted by nine cabinet ministers, as follows: Interior, Huang Fu; Foreign Affairs, Wang Ching-wei (acting); Military Affairs, Ho Ying-ch'in; Navy, Ch'en Shao-k'uan; Finance, Dr. H. H. Kung; Industries, Chen Kung-po; Railways, Ku Meng-yü; Communications, Chu Chia-hwa; Education, Wang Shih-chieh. For changes in 1935, see under *History*.

HISTORY

Japan in North China. The groundwork for the establishment of a Japanese protectorate over all of China proper was laid during 1935 through a judicious mixture of Nipponese diplomacy and armed force. During the years 1931-34 Japan had torn Manchuria and Jehol Province in Inner Mongolia from China and consolidated its position there through the creation of the puppet state of Manchoukuo (q.v.). The former Manchu "boy emperor" of China had been elevated to the Manchoukuo throne at Hsinking, with the intimation that he was destined eventually to rule a much larger empire from his former capital at Peiping (Peking). In 1935 the Japanese moved south of the Great Wall and partially detached Hopei Province in China proper and Chahar in Inner Mongolia from the Nanking Government's control.

Chinese passive resistance managed to stave off temporarily the incorporation of Shantung, Shansi, and Suiyuan Provinces with Hopei and Chahar in a projected North China "autonomous region" under Japanese protection. But it was admitted by Japanese and Chinese spokesmen alike that these important provinces would follow Hopei and Chahar into the maw of the Nipponese military machine soon, and that the rest of China would follow in due course. Working through native "autonomy movements," the Japanese at the close of 1935 were also extending their military control into Ningsia Province in the western part of Inner Mongolia and were battering at the doors of Outer Mongolia, long under Soviet protection.

Thus the situation in the Far East closely resembled that of 1915, when Japan, taking advantage of the capture of German Kiaochow and the absorption of the other powers in the World War, induced the Chinese government by threats and bribery to accept a virtual Japanese protectorate in the form of the notorious Twenty-One Demands—demands which were withdrawn at the insistence of the powers after the War. In 1935, with Europe engrossed in the Italo-Ethiopian conflict and German rearmament, the military clique dominating Japan considered the time ripe for the further development of their plans for Far Eastern hegemony. They played boldly and skillfully for stakes of the highest importance—the exclusive control of the great Chinese market, the profitable exploitation of China's rich natural resources, and, even more vital, the establishment of strategically favorable positions for the coming war with Soviet Russia. Convinced that the conflict with the Russian colossus could not long be postponed, the Nipponese generals strove to outflank Soviet Siberia in advance by establishing military control over both Inner and Outer Mongolia. A secondary but related Japanese objective in Mongolia was to check the spread of communism into Manchuria and North China and to isolate Communist-controlled areas in central and western China from the Soviet Union and sovietized Outer Mongolia.

Avoiding the appearances of outright aggression, the Japanese carried through their policy in

China largely by indirection. Unofficially they offered the Nanking Government the choice of having Northern China seized by armed force or of accepting the following minimum Japanese demands,—suppression of anti-Japanese agitation and boycotts, acceptance of Japanese cooperation in economic matters, and prevention, with Japanese aid if necessary, of the spread of communism from Mongolia. The events of 1931-34 in Manchuria, Jehol, and North China had demonstrated China's helplessness against the Japanese Empire's armed might. Rather than present Japan with an excuse for outright annexation of territory, the Nanking Government under Gen. Chiang Kai-shek capitulated to these demands in principle, while seeking by subterfuge and evasion to yield as little as possible. The formula by which the Japanese achieved their successive advances against Chinese obstruction was explained by Nathaniel Peffer in the *New York Times* (Oct. 20, 1935) as follows:

True to its military traditions, Japan uses an almost classical strategy in its dealings with China. First there are diplomatic reconnaissances in the form of complaints of China's "insincerity" or "unfairness to Japan's interests." Then there are preliminary skirmishes in the form of warnings that China's conduct may lead to unfortunate incidents. Then there are incidents followed by more direct warnings.

There follow minor clashes which always come about at opportune moments. And then there are manœuvres in the form of more or less secret and always indirect demands on the Chinese Government. Then Japan moves forward into the diplomatic and military area marked out for itself although it is never openly avowed. There follows a lull in which Japan is engaged in consolidating its gains, after which a new cycle begins.

Following this regular pattern of procedure, 4000 Japanese and Manchoukuoan troops late in January, 1935, seized some 700 square miles of territory in southeastern Chahar and incorporated it into Manchoukuo. The next move of the Japanese forces in Manchuria, known as the Kwantung Army, was to send troops southward from the Great Wall into the demilitarized area extending to within a few miles of Peiping and Tientsin, established under the Tangku Truce of May 31, 1933 (see 1933 YEAR BOOK, p. 395). The excuse offered for this invasion was that Chinese irregulars had entered the zone and threatened the peace of Jehol. The Japanese troops failed to withdraw after the "disorderly elements" were crushed. Instead on May 29 the Kwantung Army—apparently without consulting the Tokyo Foreign Office—presented a new series of demands backed by the threat to occupy Peiping and Tientsin. This virtual ultimatum called for the evacuation of the Peiping-Tientsin region by Chinese troops, elimination of all government officials in North China who were hostile to Japan, closing of the Kuomintang (Chinese Nationalist Party) branches and offices in North China, suppression of anti-Japanese organizations in North China, and elimination of anti-Japanese propaganda from the Chinese schools and all books. The terms were accepted by the Nanking authorities on June 12.

Penetration of Mongolia. Coincidentally the overnight detention of four Japanese agents in Chahar Province on June 5 led to related demands with respect to that region which were accepted by the Chinese on June 27. This agreement secured for the Japanese a guarantee of safe and unhindered travel in Chahar, dissolution of Kuomintang branches there, cessation of Chinese emigration into eastern Chahar, removal of Chinese troops from Changpei on the Kalgan-Urga caravan routes, and the establishment of a new

demilitarized area in eastern Chahar. Following this settlement the Japanese rapidly extended their control over Chahar. The existing influence exercised by a Japanese military mission at Kalgan, the most important strategic point in Inner Mongolia, was reinforced by the appointment of military and civil advisers to the Chahar government in July. These steps were the prelude to the occupation of Kalgan by Japanese troops on December 14. Meanwhile the Nipponese had utilized their new foothold in Chahar to exert steady pressure upon the autonomous Mongol government, established in part of Inner Mongolia in 1934, to accept incorporation in Manchoukuo. The Japanese further demanded that the Mongol leaders at Pailingmiao (the Mongol capital in Suiyuan Province) accept Japanese advisers and agree to the erection of a wireless station. The pressure of the Kwantung Army again proved effective, and on December 23 Prince Teh, a leader in the Mongol autonomy movement, proclaimed the independence from China of the western part of Inner Mongolia, including large parts of Suiyuan and Ningsia Provinces. During the same months, the Japanese, acting ostensibly for the Manchoukuo government, were attempting to force their way into the eastern part of Outer Mongolia (see *MONGOLIA and JAPAN under History*).

"Autonomy" in North China. With the acceptance by Nanking of the Japanese demands regarding North China on June 12, the Nipponese began actively to lay the groundwork for the establishment of a five-province autonomous administration under Japanese supervision. The next step would be the proclamation of the autonomous area as an independent state and possibly its incorporation in Manchoukuo. Throughout June the troops controlled by Gen. Chiang Kai-shek were withdrawn from Chahar, Suiyuan, Shansi, Hopei, and Shantung Provinces. Nanking officials resigned and were replaced by Chinese acceptable to the Kwantung Army. Anti-Japanese statements were eliminated from the press. The Kuomintang branches, the Chinese Fascists (Blue Shirts) organized by Chiang Kai-shek, and other influential persons known to be loyal to the central government were forced out or driven underground. They were replaced by officials owing allegiance to Yen Hsi-shan, so-called "model Governor" of Shansi Province, and an old enemy of Chiang's, or to other provincial governors who were regarded as luke-warm in their loyalty to Nanking. It was expected that under the proper financial inducement and armed pressure, Yen Hsi-shan, Governor Han Fu-chu of Shantung, the former "Christian General" Feng Yu-hsiang, and other North China militarists would take the lead in severing North China from Nanking.

In anticipation of this, the Japanese announced plans for the development of an air service linking Peiping and Tientsin with Manchoukuo. They declared that the secret terms of the Tangku Truce of 1933 gave them the right to develop all forms of communications and transportation facilities in China, a claim which was officially denied at Nanking. Japanese business men began to invade the Peiping-Tientsin region in increasing numbers, with plans for extending the market for Japanese goods and for the exploitation of its resources. A subsidiary of the South Manchuria Railway was established to engage in financial, commercial, and other economic activities in North China.

The Japanese plans for an autonomous North

China, however, encountered unexpected obstacles. From September on Japanese spokesmen repeatedly complained that China's promises were not being kept. On September 10 Maj. Gen. Kensuke Isogai, Military Attaché to the Japanese Embassy at Nanking, warned that "the entire political and military situation in North China is unsatisfactory and if not improved at an early date in accordance with the Chinese pledges of last June the Japanese Army must necessarily take appropriate action." These threats were accompanied by the appearance of Japanese gunboats and destroyers at Swatow in South China and at Hankow on the Yangtse to repress alleged anti-Japanese activities. The Japanese spokesmen assumed a menacing attitude towards Chiang Kai-shek, whom they charged with frustrating Sino-Japanese cooperation; at the same time Chiang was vigorously denounced by patriotic Chinese for his seeming pro-Japanese policy. Chiang was obliged to steer an increasingly tortuous course, taking care not to provoke the Japanese to a large scale invasion of China and at the same time not to unite the internal opposition to his régime by yielding too much to the Japanese. But as the year drew to a close, mass Chinese opposition to Chiang's policy of non-resistance gained strength rapidly under the leadership of student nationalist organizations and prevented, temporarily at least, the consummation of Japan's plans in North China.

The attempted assassination of Premier Wang Ching-wei on November 1 was an indication of the growing intransigence of Chinese patriotic sentiment. Wang was one of the foremost advocates of Sino-Japanese rapprochement. This attack, followed on November 3 by the Nanking Government's nationalization of silver and adoption of a managed paper currency without consulting Japan, gave the Japanese policy in China a further setback. Meanwhile at Swatow the Chinese successfully defied Japanese threats of armed intervention to stop the collection of taxes on rice imported from Formosa. Anti-Japanese riots broke out in Shanghai early in November. Strong sentiment for armed resistance to Japan was manifested at the Fifth Kuomintang Congress, which met at Nanking from November 12 to 24. The conference, significantly, was attended by Generals Yen Hsi-shan and Feng Yu-hsiang, upon whom the Japanese relied in part for carrying through their scheme for an autonomous North China.

Mobilizing several divisions of the Kwantung Army at Shanhaikuan the Japanese in the middle of November brought pressure upon the generals in North China to proclaim the autonomy of the five selected provinces during the week of November 18. Their plans miscarried badly, to the evident chagrin of Kwantung Army leaders, through the refusal of some of the key Chinese generals to play the rôle assigned to them. The latter were aided in their stand by Chiang Kai-shek's action in mobilizing 150,000 picked troops along the southern borders of the five Provinces. Contradictory policies and lack of cooperation between the Kwantung Army and the Foreign Office in Tokyo was apparently another factor in the failure of the autonomy plans. The autonomy proclamation finally issued on November 24 by Yin Ju-keng, a pro-Japanese official, was confined to 18 counties in northern Hopei and eastern Chahar in and near the demilitarized zone. The region contained about 4,000,000 inhabitants.

The Japanese were temporarily frustrated but

by no means discouraged. They immediately began to move troops southward from Shanhaikuan into the Peiping-Tientsin area. By December 1, 10,000 troops were concentrated there, in control of railway junctions and other strategic points. The Chinese again capitulated before this display of force. On December 7 Maj. Gen. Hayao Tada of the Kwantung Army, in conference with War Minister Ho Ying-ching of the Nanking régime, Gov. Hsiao Cheng-ying of Chahar and Gen. Sung Cheh-yuan, commander of the Peiping-Tientsin Chinese garrisons, agreed upon the establishment of a semi-autonomous régime including Chahar and Hopei Provinces only. Six days later the Nanking Government appointed Gen. Sung Cheh-yuan, head of the new Hopei-Chahar Political Council, as Governor of Hopei Province. The Hopei-Chahar Council, consisting of 17 northern Chinese leaders considered friendly to Japan, soon demonstrated that it was not prepared to extend the full cooperation desired by its Japanese sponsors. Thus the Chinese policy of alternate resistance and submission had saved for the time being three of the five provinces marked out for separation. Moreover the semi-autonomous régime in Hopei and Chahar reasserted its claim to administer the district declared autonomous under Yin Ju-keng on November 24. Japan, however, had succeeded in establishing itself more firmly in China proper and it was plain that the admittedly temporary arrangement was but the prelude to a further extension of Japanese control.

Japan's expansion from the limits obtained in the December 7 agreement was in full swing as the year ended. Rejecting the Hopei-Chahar Political Council's claim to administer Yin Ju-keng's district, the Japanese instigated the latter's forces to seize Tangku, the seaport of Tientsin, on December 16. It was immediately incorporated in the autonomous zone. With the formal installation of the Hopei-Chahar Council on December 18, the Kwantung Army's commander in North China formally warned Gen. Sung Cheh-yuan that his government was expected to accept Japanese guidance. General Sung, however, proved a none-too-pliable tool. Declining to accept Japanese orders on matters of policy and administration, he evaded specific demands by declaring he could not act without orders from Nanking. Thus the year closed with the Japanese in North China consolidating their position and laying the political and military foundation for another cycle of expansion.

Policies of Other Powers. Whereas the United States in 1932 had taken the lead in opposing Japan's conquest of Manchuria, in 1935 the British Government displayed major evidences of alarm as the Japanese expansion threatened the regions in North and Central China where British financial and commercial interests predominated. Early in 1935 a financial and economic crisis developed in China, largely as a result of the deflationary effect of the silver-buying policy of the United States Government, which threatened to throw China into Japan's arms. The British Government had rebuffed Nanking's overtures for a loan towards the end of 1934, but in March the British Foreign Office sounded out the governments of the United States, Japan, and France as to the possibility of a new international loan to assist China economically. Such a loan, incidentally, would have strengthened the hands of Nanking in dealing with Japan. Japan rejected the British proposal outright and it was dropped for the time

being. The crisis was met temporarily by an internal Chinese loan for 100,000,000 silver dollars.

Alarmed by the continuance of the Chinese economic crisis, the obstacle to British trade caused by depreciation of the silver dollar, and the effect of the American silver policy upon India, the British Government in September sent Sir Frederick Leith-Ross to China to study the situation and propose remedies. Although Sir Frederick stopped in Tokyo to consult Japanese leaders, the British initiative was received with ill grace in Japan. Japanese suspicion of British policy mounted when China on November 3 abandoned the silver standard and adopted a managed paper currency. Despite Sir Frederick Leith-Ross's denials, the indications were that he helped Chinese currency officials to frame the new policy, which coincided perfectly with British financial interests. Following the lines of his pronouncement of Apr. 18, 1934, that Japan would not tolerate interference with its Asiatic policy by the Western powers, the Foreign Office spokesman at Tokyo on November 25 warned Sir Frederick Leith-Ross not to obstruct the autonomy movement in North China. He also accused the London government of hampering Foreign Minister Koki Hirota's "conciliatory policy" towards China.

This statement coincided with the movement of Japanese troops into North China. The British Government on November 28 formally asked Japan to state its intentions in China and recalled Japan's obligation to respect China's integrity under the Nine-Power Treaty. On December 5 the American Secretary of State issued a warning that the United States was closely following developments in China and that it maintained its treaty rights in that country. The same day Sir Samuel Hoare, the British Foreign Secretary, issued a somewhat similar declaration in the House of Commons. The Japanese response indicated that they considered the Nine-Power Treaty as a dead letter. Despite the urgent representations of Chinese diplomats, neither Great Britain, the United States, or the League of Nations indicated any desire to do more than protest Japan's gradual absorption of China.

It was somewhat ironic that with China in the throes of her death struggle with Japan, the United States and Britain in May followed the lead of Italy and Japan in raising their legations in China to the status of embassies. The conclusion by China of an important commercial treaty with French Indo-China, effective July 22, and an agreement with Britain for joint delimitation of the frontier between Burma and Yunnan Province were other developments of the year. On March 16 China filed a formal protest against the sale of the Chinese Eastern Railway by the Soviet Union to Manchoukuo (see MANCHOUKUO and JAPAN under *History*). The Nanking Government declared that it would refuse to acknowledge the validity of the sale.

Internal Political Trends. China's impotence in the face of Japanese aggression was due to the deep cleavages and sectional rivalries which divided the country. The power of the central government at Nanking was concentrated largely in Shanghai and the rich Yangtse Valley provinces, and was based almost exclusively upon the military power wielded by Gen. Chiang Kai-shek. The rich and populous southern provinces of Kwantung and Kwangsi were independent of the central government for all practical purposes. They were ruled from Canton by Marshal Chen Chia-

tang and his associates, organized as the Southwest Political Council. The Communist armies, driven westward from Kiangsi and Fukien Provinces in 1934 by Chiang Kai-shek, had established a new stronghold in Szechuan and were reported to be extending their influence into Shensi, Shansi, and Kansu in the west and northwest. The leading Chinese warlords of North China were cool towards Chiang, but supported him against Japan because the Nipponese threatened their extinction.

The Spread of Communism. The three major issues confronting the Nanking government during 1935 were those presented by Japan's aggression, the continued spread of communism, and the severe economic crisis precipitated largely by the American silver-buying policy. General Chiang, who had been engaged in sporadic warfare with the Communists ever since 1927, continued throughout 1935 his efforts to exterminate the movement, without apparent success. He no sooner cleared them from one region than they gained a foothold in another. Moreover Chiang found that areas occupied by his troops frequently reverted to communism as soon as his armed forces were withdrawn. Accordingly he took steps in Kweichow and certain other provinces to abolish or reduce the burdensome levies and land surtaxes which made the exploited peasantry receptive to Communist doctrines. Nevertheless communism continued to make substantial gains, not only among the peasantry but also in Chinese student and intellectual circles. The strength of the revolutionary movement closely linked with the Soviet Union was a powerful influence driving the Nanking régime towards an anti-Communist entente with Japan even at the cost of Chinese independence.

The Financial Crisis. Another powerful influence which promised to force the Nanking Government to accept Japanese financial aid and political domination was the silver policy of the United States. The Silver Purchase Act of June 20, 1934, caused a world-wide rise in the price of silver which effectively checked the economic recovery under way in China. Silver in China became more valuable than the paper currency issued against it, with the result that the Chinese took their paper currency to the banks, obtained silver for it, and exported the metal at a profit for sale to the United States. This produced a scarcity of money. Credit became dear, prices declined with widespread deflationary effect, and the resulting cycle of failing banks and business enterprises and trade stagnation caused general suffering and an alarming weakness of the Chinese banking structure. Attempts of the Nanking authorities to check the outflow of silver by the embargo decree of October, 1934, proved only partly successful. A 100,000,000 dollar (Chinese) domestic loan enabled the government to ride out the storm until Nov. 3, 1935, when the Central Government abandoned the silver standard, nationalized all silver stocks, and adopted a managed paper currency. The primary purpose of this move was to check the steady fall in prices. Much to the surprise of the Chinese, the United States soon afterwards permitted world silver prices to slump, thus dealing a severe blow to the Chinese currency policy. The effectiveness of the new policy was not fully determined by the end of the year.

The Anti-Japanese Agitation. In the areas under Chiang Kai-shek's control the growing resistance to his policy of seeming submission to Japan forced him throughout the year to resort to a

terroristic drive against anti-Japanese elements, especially among the university students. The provinces of South China, always militantly nationalistic, through the Southwest Political Council at Canton likewise bitterly attacked Chiang for his failure to protect Chinese independence and threatened to sever all relations with the Nanking régime should he yield further to Japan. These protests, given point by the attempted assassination of Premier Wang Ching-wei on November 1, came to a head during the sessions of the Fifth Kuomintang Congress at Nanking during November 12-24. At the same time Hu Shih and other leading educators of North China issued a statement calling on the Nanking government to preserve China's territorial and administrative integrity with "the resources of the entire nation. . . ."

The pressure for democratization of the Nanking régime and for resistance to Japan failed to influence Gen. Chiang Kai-shek. He insured his domination of the Nanking government by concentrating large bodies of his troops in the vicinity during the Kuomintang Congress sessions. Instead of bringing the Cantonese and other dissident elements into the government, Chiang on December 7 assumed the chairmanship of the Executive Yuan, the post corresponding to the Premiership which Wang Ching-wei had resigned. He thus extended his dictatorship by exerting direct control over the military and political activities of the central government. That he still favored a passive policy towards Japan was indicated by the cabinet reorganization of December 13, which brought into office a group of new ministers educated wholly or in part in Japan and apparently committed to a pro-Japanese policy. Among them were Gen. Chang Chun, Foreign Minister; Chiang Tso-pin, Minister of Interior; Wu Ting-chang, Industry; and Chang Kiangau, Railways.

These developments provoked a wave of student resistance which temporarily threatened the life of the Nanking government. Defying a Nanking decree of June 10, 1935, against anti-Japanese activities, the students of North China in October organized a federation which rapidly spread to other universities and secondary schools. Their nationwide protest movement was partly responsible for the miscarriage of the "autonomy movement" in North China in November. On December 9-11 they held great demonstrations in Peiping against the establishment of the Hopen-Chahar Political Council. The appointment of a pro-Japanese cabinet on December 13 and reports that it had secretly agreed to support a policy of "Sino-Japanese co-operation," led to new demonstrations in Shanghai. On December 25 Tang Yu-jen, newly appointed Vice Minister of Railways and chief go-between in the negotiations with Japan, was shot to death in Shanghai. By the end of December the student movement had assumed such strength that the authorities were obliged to declare martial law in Shanghai, Nanking, and Hankow. The anti-Japanese boycott had been resumed in Canton despite Japanese warnings of the grave consequences that would follow and it threatened to spread to the Yangtse valley. Unable to break up the student movement without alienating still further Chinese opinion, the Nanking Government faced the probability that its acquiescence in the student campaign would provide Japan with an excuse for new and more serious aggressions.

Floods. For the third successive year tremendous floods inundated the Yangtse Valley during the first half of July, covering some 50,000 square

miles of rich farm land, drowning thousands, and leaving some 10,000,000 persons homeless and exposed to famine. In December the Yellow River went on another of its periodical rampages, submerging 10 populous counties and driving 5,000,000 persons in Shantung Province from their homes. As the year closed millions were reported in danger of starvation and the most intense cold recorded in North China in many years was increasing the sufferings of the tortured nation.

See EXPLORATION.

CHINCH BUG. See ENTOMOLOGY, ECONOMIC.

CHINESE ART. See ART EXHIBITIONS.

CHORAL MUSIC. See MUSIC.

CHRISTIAN ENDEAVOR, INTERNATIONAL SOCIETY OF. An organization founded in Portland, Me., in 1881 by the Rev. Francis E. Clark, D.D., a Congregational minister, for the purpose of pledging young people to certain forms of Christian devotion, expression, and service. In 1935 it consisted of 58,000 societies in the United States and Canada, with a membership of more than 2,500,000. Throughout the world there were in the same year approximately 80,000 societies, with a membership of more than 4,000,000, in 105 countries, dominions, and island groups, representing more than 80 evangelical and reformed denominations. These societies were united into national unions which, in turn, composed the World's Christian Endeavor Union. During 1935 the most notable advances reported were in Australasia, in Spain, in Korea, in the British Isles, and in Hungary. For the activities of this society consult THE NEW INTERNATIONAL YEAR BOOK for 1932.

At the biennial convention of the International Society of Christian Endeavor, held in Philadelphia, Pa., July 2-7, 1935, the Rev. Daniel A. Poling, D.D., I.L.D., was reelected president and the Rev. William Hiram Foulkes, D.D., the Rev. A. E. Cory, D.D., and Mr. Harry N. Holmes, vice-presidents. The official magazine is the *Christian Endeavor World* (quarterly). Headquarters are in the World's Christian Endeavor Building, Mt. Vernon and Joy Streets, Boston, Mass.

CHRISTIAN SCIENCE. A system of metaphysical or spiritual healing, discovered by Mrs. Mary Baker Eddy in 1836 and set forth in her textbook of the movement, *Science and Health with Key to the Scriptures*, first published in 1875. The first church was established by Mrs. Eddy in Boston, in 1879. In 1892 it was reorganized as a voluntary religious association, known as The First Church of Christ, Scientist, in Boston but called more frequently by its adherents "The Mother Church."

The total number of recognized branches of The Mother Church reported for the fiscal year ending May 31, 1935 was 2721 of which 47 were college and university organizations. During the year 73 churches and societies were recognized as branches, 47 being in North America, 1 in South America, 17 in Europe, 4 in Australasia, 2 in Asia and 2 in Africa.

The affairs of The Mother Church are administered by a board of directors, which supervises the work of the board of education, board of lectureship, and committee on publication. The board of education instructs and authorizes students to teach Christian Science. The board of lectureship consists of 22 members who are engaged in delivering free lectures on Christian Science. During 1935 they delivered lectures in Europe, Australasia, Hawaii, and the Orient, Africa, Bermuda, West

Indies, Mexico, Canal Zone, United States, Canada, and Alaska.

The Christian Science Publishing Society, whose affairs are administered by a board of trustees according to the *Manual* of the church, issues the daily paper of the organization, *The Christian Science Monitor*. Other periodicals include *The Christian Science Journal*, *Christian Science Sentinel*, *Christian Science Quarterly*, and four editions of *The Herald of Christian Science* in the German, French, Dutch, and Scandinavian (Danish, Swedish, and Norwegian) languages, each with the English translation opposite, and in braille.

The benevolent association of the church conducts sanatoria in Brookline, Mass., and San Francisco, Calif. Pleasant View Home at Concord, N. H., is a home for Christian Scientists of advanced years. Dr. John M. Brewer was president of The Mother Church for the year ending May 31, 1935. Headquarters are at 107 Falmouth Street, Boston, Mass.

CHRISTMAS ISLAND. The name of two separate islands. (1) An island in the Indian Ocean (10° 30' S. and 105° 40' E.) belonging to the Straits Settlements. Area, 60 sq. miles; population (Jan. 1, 1934), 872. (2) An atoll in the Pacific (2° N. and 157° W.), over 100 miles in circumference, included in the (British) Gilbert and Ellice Islands Colony.

CHRONOLOGY. The following chronology lists the more important happenings of the year 1935 according to the dates of occurrence. In most cases these are treated in more detail under their respective headings. To such articles, particularly those on leading countries and States, such as UNITED STATES, GREAT BRITAIN, and NEW YORK, the reader is referred for additional information. For a list of prominent persons who died during the year, reference should be made to the article NECROLOGY and the important obituary notices there listed.

January 1—Ration card system abolished in Soviet Union.

?—74th Congress convened at Washington.

Ethiopia invoked Art. XI of League Covenant against Italy.

4—President Roosevelt asked Congress for huge public works fund to take 3,500,000 unemployed off relief.

7—U. S. Supreme Court declared oil production control provisions of National Industrial Recovery Act unconstitutional.

Franco-Italian pact was signed at Rome adjusting their disputes in Africa and establishing united front against Germany.

President Roosevelt's budget estimates for 1935-36 estimated a deficit of \$4,528,000,000 on expenditures of \$8,520,000,000.

9—*I'm Alone* case decided in Canada's favor by joint American-Canadian judicial commission.

10—First Portuguese parliament since 1926 convened at Lisbon.

12—Amelia Earhart landed at Oakland, Calif., completing first solo flight from Honolulu in 18½ hours.

13—Saar plebiscite showed voters standing 9 to 1 in favor of return to Germany.

14—Netherlands court invalidated gold clause in dollar bonds of Royal Dutch Shell Co.

15—Constitutional rights were suspended in Cuba.

16—Following Paraguay's rejection of League peace plan, the League Assembly's Chaco committee urged member States to withdraw arms embargo against Bolivia and strengthen it against Paraguay.

President Roosevelt urged U. S. entrance into World Court in special message to Congress.

17—Prime Minister Bennett outlined Canadian New Deal in face of impending general election.

Gregory Zinoviev, Lev Kamenev, and 17 other prominent left-wing Communists sentenced to long prison terms or exile on charge of conspiring against Stalin faction.

21—Thomas J. Mooney's motion for permission to file petition for an original writ of habeas corpus denied by U. S. Supreme Court.

22—Georgiev Cabinet resigned in Bulgaria; Gen. Zlatev, leader of royalist coup, became Premier.

24—U. S. House passed \$4,880,000,000 work relief bill, 329 to 78.

29—U.S. Senate rejected proposal for membership in World Court by margin of seven votes.
New Italo-Ethiopian clash took place at Addis near Ethiopia's southeastern border.

31—President Roosevelt signed bill extending Reconstruction Finance Corporation for two more years.
Kentucky National Guard established martial law in Clay County to eradicate lawlessness.

Failure of U.S. Soviet debt negotiations reported.
February 1—Universal military training in Italy extended to include boys in grade schools.

2—North Dakota Supreme Court ruled that Gov. Thomas H. Moodie was ineligible to hold office. Lieut.-Gov. Walter H. Welford succeeded him.

U.S. and Brazil signed reciprocal trade treaty at Washington.

4—President Roosevelt signed bill raising Federal debt limit to \$45,000,000,000 and authorizing issuance of "baby bonds."

U.S. Supreme Court upheld Senate's power to imprison William F. MacCracken, former Commerce Department official, for withholding papers in airmail inquiry.

6—Canada solved its first kidnapping case, a London, Ont., jury sentencing David Meisner, American gambler, to 15-year term for kidnapping of John S. Labatt.

7—Indian Legislative Assembly opposed new Federal Constitution.

8—Philippine constitutional convention approved charter for Commonwealth government.

Mustafa Kemal Atatürk's People's Party won overwhelming majority in elections to Turkish Grand National Assembly.

President Roosevelt signed order withdrawing remaining 1,200,000 acres of public lands from settlement.

11—Several prominent London firms with liabilities aggregating \$15,000,000 failed with bursting of speculative pepper pool.

12—U.S. Navy dirigible *Macon* crashed in the Pacific and sank with loss of 2 out of 83 on board.

13—Bruno Richard Hauptmann convicted of murder in first degree by Flemington, N. J., jury for the killing of Charles A. Lindbergh Jr. on Mar. 1, 1932.

16—Reinforcements for Italian forces in Eritrea and Italian Somaliland began to leave Rome.

18—U.S. Supreme Court upheld, 5 to 4, action of Congress in abrogating gold clause in private contracts and devaluing the dollar.

21—Reich Government ordered forced loan for unemployment relief.

22—Federal Judge W. I. Grubb at Birmingham, Ala., ruled that sale of TVA power in competition with private utilities was illegal.

23—Paraguay announced her withdrawal from League of Nations.

24—Swiss referendum ratified law extending compulsory military service term.

26—Prohibition referendum in Alabama won by "drys." Argentina opposed League sanctions against Paraguay.

March 1—The Saar was formally reincorporated in Germany.

Mustafa Kemal Atatürk reelected President of Turkey by National Assembly.

Republican army and navy officers in Greece revolted against Tsaldaris Government's pro-monarchist policy.

2—King Prajadhipok of Siam abdicated the throne.

Prince Ananda Mahidol, aged 11, proclaimed his successor.

4—Count Bethlen's adherents eliminated from Gombos Cabinet in Hungary.

U.S. Supreme Court overthrew New York State's milk control law as a restriction on interstate commerce.

5—Wisconsin Supreme Court ruled that State's Recovery Act illegally delegated legislative powers to industry.

6—Estonia's dictatorship abolished political parties in favor of one-party system.

7—Bolivian Congress extended Pres. José Luis Tejada Sorzano's term to August 16 and authorized him to carry on Chaco War.

11—The Bank of Canada, the Dominion's new central bank, was opened for business.

General strike was inaugurated against Mendieta Government in Cuba.

Samuel Insull, utility magnate, was acquitted by Chicago jury of charge of misappropriating \$66,000 belonging to Middle West Utilities Co.

12—General Kondylis, Greek Minister of War, crushed republican revolt, former Premier Venizelos fled from Crete.

14—Vienna court sentenced Anton Rintelen, Austrian Minister to Italy, to life imprisonment for complicity in Nazi *putsch* of July 25, 1934.

Lloyd George presented "New Deal" programme to British Government.

15—Attempt of three armed Zeidis from Yemen to assassinate Ibn Saud, King of Saudi Arabia, at Mecca frustrated by his guard.

The Dionne quintuplets were placed under control of Minister of Welfare by act of Ontario Legislature.

16—The Third Reich reinstated universal conscription in defiance of Versailles Treaty.

Labor Government formed in Norway.

French Parliament lengthened army service term.

17—German secret police arrested about 700 Protestant pastors.

19—Soviet régime exiled over 1000 members of various opposition groups.

Paul van Zeeland succeeded George Theunis as Premier of Belgium.

Negro riots in Harlem district of New York City cost three lives, injuries to more than 100, and heavy property damage.

20—Secretary Wallace removed restrictions on spring wheat crop for 1935 to offset drought losses in 1934. Meanwhile dust storms scourged the Middle West.

21—President Roosevelt reorganized NRA, giving labor equal representation, and appointed Donald Richberg acting chairman of National Industrial Recovery Board.

22—U.S. House passed Patman "greenback" bonus bill, 318 to 90.

23—Russia's sale of Chinese Eastern Railway to Manchoukuo was consummated with payment of first installment in Tokyo. Name of line changed to North Manchuria Railway.

The Italian Cabinet called another class of conscripts to the colors.

President Roosevelt signed the new constitution of the Philippine Commonwealth.

26—Foreign Minister Simon of Britain and Chancellor Hitler ended a two-day conference in Berlin.

Lithuanian court at Kaunas sentenced four Memel Nazis to death and 15 others to long prison terms for conspiring to return Memel to Germany.

De Valera Government arrested leaders of Irish Republican Army.

27—Japan's resignation from League of Nations became effective.

John Buchan was appointed Governor-General of Canada.

28—Belgian Government closed Bourse to check financial crisis; on following day gold standard was suspended, the belga devalued, and reconstruction plan on "New Deal" model launched.

Anthony Eden, British Lord Privy Seal, arrived in Moscow for conferences on European situation with Litvinov and Stalin.

Cabinet under Col. Walery Slawek replaced Kozłowski Ministry in Poland.

31—Athens court-martial sentenced 10 republican revolt leaders to life imprisonment.

April 1—U.S. Supreme Court ruled that two Negroes sentenced to death in Scottsboro cases must have new trials due to barring of Negroes from juries in Jackson and Morgan counties, Ala.

Pius XI issued appeal for world peace.

2—Reich Government took over administration of justice from local authorities throughout Germany.

Edward J. Kelly was reelected mayor of Chicago in Democratic landslide.

5—Congress gave final approval to \$4,880,000,000 work relief bill.

6—Emperor Kangtê of Manchoukuo paid state visit to Emperor Hirohito in Tokyo.

Having driven the Bolivian troops out of most of the Chaco Boreal, the Paraguayans invaded Bolivia proper, crossing the Parapiti River into Santa Cruz Province.

7—Danzig elections gave the Nazi Government a larger majority but it failed to win the two-thirds vote needed to amend constitution and establish totalitarian state.

10—U.S. Government boosted price offered for newly mined silver from 64.6 cents to 71 cents an ounce.

Manchoukuoan oil monopoly went into effect despite American and British objections.

11—Heavy dust storms harassed a large part of the U.S.

12—Anti-war demonstrations held in many colleges and schools throughout the U.S.

13—Terminating three-day conference at Stresa, Italy, the British, French, and Italian governments established united front in defense of "collective security within the framework of the League of Nations."

14—The coalition majority in Puerto Rican Legislature "struck" against alleged "dictatorship" in Washington, demanding exclusive control over patronage on the island.

16—Paraguayans captured town of Charagua in Santa Cruz Province.

Swedish court upheld validity of gold clause in Swedish Government's dollar loan of 1924.

17—Pan-American Airways clipper plane arrived in Honolulu with crew of six on test flight over first lap of proposed trans-pacific air line.

League Council approved resolution drafted by the Stresa Conference condemning Germany's rearmament in violation of the Versailles Treaty and proposing joint action against future violations.

18—Germany in note denounced Britain's action at Stresa Conference as betrayal of Simon-Hitler understanding.

King Boris regained control of Bulgarian affairs in

crisis resulting from arrest of two former Premiers and the subsequent resignation of the Zlatev Cabinet.

19—U.S. House passed Social Security Bill, 372 to 33.

Washington authorities took over administration of Federal relief in Georgia, following split with Governor Talmadge.

21—Earthquakes in Formosa killed more than 3000 and injured over 9200.

22—Pressure from Egyptians and British forced King Fuad to dismiss Zaki El Ibrashi Pasha, his confidant, who virtually ruled Egypt during the King's illness.

23—The Bolivians launched a successful counter-offensive against the Paraguayan invaders of Santa Cruz Province, recapturing Charagua.

New authoritarian Polish constitution proclaimed. China introduced compulsory student military training.

24—U.S. Government again raised buying price for newly mined silver from 71 to 77 57 cents an ounce.

25—California Assembly recommended commutation of terms of Thomas J. Mooney and Warren K. Billings.

26—New York Court of Appeals ruled Schackno State NRA Act unconstitutional.

27—U.S. Resettlement Administration was directing exodus of 45,000 persons from sub-marginal hill farms in the Ozarks to more fertile lands.

29—Arizona's right to prevent Federal construction of Parker dam project on Colorado River was upheld by U.S. Supreme Court.

May 1—May Day in Mexico was marked by redistribution of 1,365,910 acres of land among 37,000 landless farmers.

2—Uprising of radical Sakdalists in the Philippines was crushed by the constabulary with 60 deaths.

France and the Soviet Union signed a mutual assistance pact aimed at Germany.

3—Foreign Ministers of Baltic Entente conferred at Kaunas, Lithuania.

5—Yugoslav Government won a three-fifths majority in parliamentary elections.

Eleutherios Venizelos, General Plastiras, and two other fugitive revolutionary leaders sentenced to death by Greek court-martial.

6—Britain's royal family attended services at St. Paul's cathedral to inaugurate the celebration of the 25th anniversary of King George's accession.

Premier Alejandro Lerroux formed a new cabinet in Spain.

U.S. Supreme Court ruled Railroad Retirement Act unconstitutional by 5 to 4 decision.

7—U.S. Senate passed Patman inflationary veterans bonus bill, 55 to 33.

8—The killing by Cuban troops of Antonio Guiteras, a former member of the Grau San Martin Cabinet, removed the most determined enemy of the Mendieta-Batista regime.

9—Bill revising banking system and establishing Federal insurance of bank deposits passed U.S. House.

12—Marshal Pilsudski, Polish dictator, died at Warsaw.

13—Philippine voters approved new Commonwealth Constitution by 20 to 1 majority in special plebiscite.

Premium on silver arising from Italian military preparations in East Africa led Italy to ban exports of the metal.

Secretary of the Treasury Morgenthau indicated that Washington was ready to join world monetary stabilization movement.

15—Moscow's new subway, declared the most beautiful in the world, was opened to the public.

16—U.S. Senate passed the Wagner Labor Disputes Bill. Soviet-Czechoslovak mutual assistance pact signed.

Legations of U.S., Britain, and Japan in China raised to embassies.

17—Of five persons found guilty at St. Paul, Minn., of kidnapping E. G. Bremer, two received life sentences.

The 11-weeks' transport strike which tied up all traffic in Dublin, Irish Free State, ended with wage increase for strikers.

18—The huge Soviet plane *Maym Gorki*, largest in the world, crashed near Moscow, killing 48 occupants.

Emperor Haile Selassie issued decrees abolishing slavery and reforming system of land taxation in Ethiopia.

19—German Nazis made striking gains in Czechoslovak general elections.

Pope Pius XI urged English people to rejoin Church of Rome.

20—Canadian Parliament reconvened at Ottawa.

President Roosevelt's executive order fixed wage scales under \$4,000,000,000 work relief programme at rates ranging from \$19 to \$94 monthly.

21—Chancellor Hitler in Reichstag address promised that Germany would violate no further provisions of Versailles and other treaties without previous agreement of the other powers concerned.

22—President Roosevelt vetoed the Patman Bonus Bill in a strong message which he read personally to both houses of Congress. The Senate sustained the veto May 23.

British Parliament authorized government to treble its air forces.

24—The world wheat control agreement was extended for

one year at London meeting of wheat-producing countries.

British Parliament declared itself legally unable to consider the petition for secession from the Australian Commonwealth submitted by Western Australia.

25—U.S. wheat farmers voted overwhelmingly in favor of continuation of AAA wheat control programme.

Japanese troops extended their control south of Great Wall in North China, wiping out more than 300 Chinese irregulars.

27—U.S. Supreme Court unanimously held the National Industrial Recovery Act unconstitutional.

28—Capital of Northern Rhodesia transferred from Livingston to Lusaka.

29—California's Pacific International Exposition at San Diego was formally opened by President Roosevelt.

Reich court sentenced German Franciscan monk to 10 years in prison and 350,000-mark fine for smuggling marks across border in violation of exchange-control laws.

31—Flandin Cabinet resigned in France over budget crisis; Fernand Bouisson formed new ministry.

Quetta, capital of Baluchistan, was leveled by an earthquake, which killed some 56,000, including 200 Britons.

June 1—Ethiopia, Egypt, and Anglo-Egyptian Sudan reported to have reached agreement on Tsana dam project.

Swiss voters in national referendum rejected recovery programme modeled on "New Deal" in the United States.

2—President Gabriel Terra of Uruguay was slightly wounded by a would-be assassin at Montevideo.

3—New French liner *Normandie* arrived in New York on maiden voyage, having established a new transatlantic speed record of 4 days, 11 hours, and 42 minutes.

German-American treaty of friendship and commerce signed at Washington.

5—Luis Companys, former President of the Catalan autonomous State, eight of his cabinet ministers, and other ringleaders of the October, 1934, revolt in Spain were sentenced to life imprisonment by a Madrid tribunal.

6—American steel executive at a New York meeting agreed to retain the hours of labor, rates of pay, and standards of fair competition established under the NRA.

British Privy Council ruled that the Dominions and Irish Free State were not subject to British law.

Pierre Laval formed a new Cabinet in France.

7—Stanley Baldwin succeeded James Ramsay MacDonald as British Prime Minister.

U.S. House and Senate voted to extend constitutional provisions of NRA to Apr. 1, 1936.

8—French Chamber of Deputies authorized Laval Government to use dictatorial financial powers in support of franc until reconvening of Parliament in October.

Floods in Nebraska, Colorado, Kansas, and Missouri caused damage estimated at \$41,000,000.

9—With Venizelists and republicans boycotting the polls, the pro-monarchist government won a smashing majority in the Greek parliamentary elections.

11—The two-day "grass-roots" conference of Midwestern Republicans at Springfield, Ill., ended with a declaration of principles.

The Constitution of 1901 was restored in Cuba, martial law was terminated, and elections were called for end of year.

U.S. Senate passed the Administration's bill for elimination of unnecessary utility holding companies.

12—Truce agreement signed by Bolivia and Paraguay at Buenos Aires led to cessation of hostilities in the Chaco on June 14.

President Trujillo of the Dominican Republic decreed amnesty for all political exiles abroad.

13—A munitions factory explosion at Reinsdorf, near Berlin, killed 102 workers and severely injured 96.

The world's heavyweight boxing crown passed to James J. Braddock, who won a decision on points over Max Baer at New York City.

14—President Cárdenas of Mexico met former President Calles' criticism of his labor policy by eliminating Calles adherents from the cabinet.

17—Manchoukuo oil monopoly forced British and American oil companies to withdraw from that territory.

18—An Anglo-German naval treaty gave Germany the right to build 35 per cent of the British tonnage.

Convict coal miners at Leavenworth, Kan., mutinied and held control of the State coal mine for 21 hours.

19—President Roosevelt asked Congress for higher income, inheritance, and gift taxes on the wealthy.

21—Estonian court-martial sentenced Fascist plotters.

25—The Negro heavyweight boxer, Joe Louis, knocked out Primo Carnera in the sixth round of a scheduled 15-round bout at New York City.

The Eucharistic Congress in Edinburgh, Scotland, was marked by religious rioting.

26—President Roosevelt created the National Youth Administration.

27—British peace poll showed overwhelming support for League of Nations, arms reductions, and application of sanctions against an aggressor.

Liberals swept polls in New Brunswick election.

28—Chinese troops withdrawn from North China under

Japanese pressure made an ineffective effort to capture Peiping.

July 1—Clashes along Soviet-Manchoukuo border evoked Soviet protest to Japan.

Gen. Hugh S. Johnson was appointed director of emergency work relief in New York City.

Anthony Eden reported to the British House of Commons that the British plan for settlement of the Italo-Ethiopian dispute by the cession of Zeila and part of British Somaliland to Ethiopia had been rejected by Mussolini.

The Chaco Peace Conference assembled at Buenos Aires.

2—The U.S. Senate ratified the so-called Roerich treaty for the protection of artistic and scientific works and institutions in time of war.

3—Demobilization of the armies in the Chaco began under the supervision of a neutral military commission.

4—Ethiopia invited the United States to exert its influence with Italy in support of the Kellogg-Briand Peace Pact.

5—President Roosevelt signed the Wagner Labor Relations Bill.

6—The Department of State warned the 125 American citizens in Ethiopia to leave before the threatened outbreak of fighting.

7—Heavy floods in central New York State caused property damage estimated at \$25,000,000.

10—The anti-Hapsburg laws of 1918 were repealed by the Austrian Federal Assembly, as a preliminary to the restoration of Archduke Otto.

An Ethiopian note to the League of Nations demanded action to check Italy's threatened aggression.

12—Belgium established diplomatic relations with the Soviet Union.

Religious rioting in Belfast, Northern Ireland, resulted in five deaths.

13—The Vargas régime in Brazil strengthened its dictatorship by outlawing the liberal Aliança Nacional Libertadora for alleged Communist propaganda.

16—U.S. Circuit Court of Appeals at Boston held the AAA processing taxes unconstitutional.

17—Laval Cabinet imposed drastic economies to balance budget and save the franc.

18—Reich officials warned Roman Catholic clergy that pulp attacks upon the Nazi régime would be rigorously dealt with.

19—Argentine decrees established a censorship over outgoing news.

21—Iranian Government's decree ordering the substitution of European head-dress for native fez caused fatal religious riots in Meshed.

22—Reich Minister of Interior forbade public demonstrations and the wearing of uniforms and emblems by Lutheran and Roman Catholic youth organizations.

Lack of agricultural labor led South Dakota authorities to remove 19,000 heads of families from relief rolls.

23—Friction in Virgin Islands was ended by transfer of Gov. Paul M. Pearson and Federal Judge T. W. Wilson to administrative posts in Washington.

Liberals won every seat in Prince Edward Island election.

25—Yugoslavia signed a concordat with the Vatican.

The first world Congress of the Third (Communist) International since 1928 assembled in Moscow.

26—Rioting Communists at New York tore the Nazi flag from the S.S. *Bremen* and threw it into the water.

27—Fifty were killed in a munitions factory explosion at Taine, Italy.

29—Thoms E. Dewey, special prosecutor appointed by Governor Lehman, assisted by a special grand jury, began an investigation of racketeering, vice, and crime in New York City.

August 1—Secretary of State Hull answered German protest over insult to German flag by Communists in New York with a formal expression of regret.

2—King George signed the India Bill, establishing a new and more liberal form of Federal government for India.

Bolivian Congress extended term of President Tejada Sorzano for one year.

4—U.S. House passed the revenue bill imposing higher taxes on the wealthy, 282 to 96.

6—Severe rioting as a protest against wage cuts broke out at the Brest naval depot in France, followed on August 8 by similar disturbances at Toulon.

Marquess of Linlithgow appointed Viceroy of India.

8—Reich Government ordered dissolution of the Stahlhelm in four provinces.

9—The Social Security Bill was passed by Congress and sent to President Roosevelt, who signed it August 14.

The Interstate Commerce Commission was given jurisdiction over trucks and buses in interstate commerce under a bill signed by the President.

10—The radical dictator of the State of Tabasco—Thomas Garrido y Canabal—fled from Mexico by aeroplane following his deposition by President Cárdenas.

11—General Motors Co. announced a \$50,000,000 expansion programme.

13—President Roosevelt signed bill restoring about 50,000

veterans of Spanish-American War, Boxer Rebellion, and Philippine Insurrection to pension rolls.

A dam near Ovada, Italy, burst, drowning 200 persons.

15—U.S. Senate approved bill raising taxes on the wealthy, 57 to 22.

18—Anglo-French proposals to avert Italo-Ethiopian war by giving Italy part of Ethiopia were rejected by Mussolini.

Brig.-Gen. Sir Alexander Hore-Ruthven named Governor-General of Australia.

19—The Banking Bill and new Railway Pension Bill were passed by Congress.

22—U.S. House passed compromise Utility Holding Company Bill, 219 to 142.

Social Credit party swept Alberta elections.

23—Frazier-Lemke farm mortgage moratorium measure passed by Congress.

24—U.S. Congress enacted laws establishing new liquor control system, and prohibiting suits against government for losses due to devaluation of the dollar.

President Roosevelt signed amended Agricultural Adjustment Act.

25—Texas entered the list of "wet" States with the repeal of the prohibition amendment to the State Constitution.

The U.S. Government protested the activities of the Moscow Congress of the Third International as a violation of Foreign Commissar Maxim Litvinov's pledge of Nov. 16, 1933, to President Roosevelt.

26—The first session of the 74th Congress was adjourned after a 5½-hour filibuster by Senator Huey Long.

28—Mussolini warned the League powers that the application of sanctions against Italy might precipitate war.

29—Queen Astrid of Belgium was killed in an automobile accident.

Conference of Scandinavian Foreign Ministers held at Oslo, Norway.

30—President Roosevelt signed the Guffey Coal Bill which passed Congress on August 23.

31—President Roosevelt signed a Congressional joint resolution calling for an embargo on arms shipments to all belligerents and withdrawing the government's protection from American citizens traveling on belligerent ships.

September 2—Japan protested to the Soviet Government against the activities of the Third International in Moscow.

2—A hurricane swept the Florida keys, killing 285 persons, including about 200 war veterans, and driving the liner *Dixie* on a reef. The liner's passengers and crew were removed in safety.

3—Secretary Hull announced that the Standard-Vacuum Oil Co. had agreed to cancel its newly acquired oil concession in Ethiopia.

The Italo-Ethiopian arbitration commission at Paris ruled that neither country was responsible for the clash at Ualual on Dec 5, 1934.

4—The League Council met at Geneva to consider the Italo-Ethiopian dispute.

A Mexican law was promulgated nationalizing all churches and buildings used for public worship.

6—President Roosevelt in a letter to Roy W. Howard promised a "breathing spell" to business.

7—The Italian Government closed most of its consulates in Ethiopia.

8—Senator Huey Long was mortally wounded at Baton Rouge, La., by Dr. Carl A. Weiss, who was then shot to death by Long's bodyguards. The Senator died September 10.

Majority of Polish voters boycotted parliamentary elections.

9—U.S. Navy Department authorized construction of 23 war vessels.

The Assembly of the League of Nations convened in Geneva in the midst of a European crisis precipitated by Italian war preparations against Ethiopia.

10—Mussolini called 50,000 more troops to the colors.

11—The British Foreign Secretary, Sir Samuel Hoare, speaking before the League Assembly, pledged Britain's "steady, collective resistance to all acts of unprovoked aggression."

12—Secretary of State Hull reminded Italy and Ethiopia of their obligation under the Kellogg-Briand Peace Pact to settle their differences peacefully.

13—Premier Laval assured the League Assembly that France would not evade her obligations under the League Covenant.

14—Mussolini's Cabinet announced that it would accept no compromise solution of its claims upon Ethiopia.

15—The German Reichstag at Nuremberg enacted laws restricting citizenship to those of German or related blood, forbidding marriages or sexual relations between Germans and Jews, and adopting the swastika banner as the national flag.

16—The Nazi party convention at Nuremberg was treated to a display of the progress made towards German rearmament.

17—Manuel Quezon was elected first President of the Philippine Commonwealth.

Pennsylvania voters rejected a proposal to revise the State Constitution along modern lines.

18—Italy announced short-term war loan totaling 7,000,000,000 lire.

19—Ethiopia accepted and Italy rejected a plan for solution of the Italo-Ethiopian dispute drafted by a conciliation committee of the League Assembly.

20—Nebraska's old-age pension legislation was declared unconstitutional by the State Supreme Court.

23—400,000 coal miners in 28 States struck for higher wages, which they obtained on September 26.

24—Joe Louis, Negro heavyweight boxer, knocked out Max Baer in the fourth round of a New York City bout.

The Seventh National Eucharistic Congress at Cleveland heard a denunciation of communism by Alfred E. Smith of New York.

25—Joaquin Chapaprieta formed a new Cabinet in Spain.

26—By unanimously agreeing to follow the procedure outlined in Article XV of the League Covenant in the Italo-Ethiopian dispute, the League Council insured the application of sanctions against Italy in case Ethiopia was attacked.

27—President Roosevelt declared U.S. would maintain 5-5-3 naval ratio by building equally with other nations.

28—Reich Government authorized its Minister of Church affairs to rule German Protestant Church despite protests of clergy and laymen.

29—Nazi candidates polled 90 per cent of the vote in the Meinel elections.

October 1—President Roosevelt spoke at Los Angeles, Calif., during vacation tour of the West. He asked liberals to stand together in support of progressive policies.

Lithuania abandoned the gold standard.

2—Ethiopia again requested the League Council to send neutral observers to watch developments on her frontiers.

The British Labor party voted 2,168,000 to 102,000 in favor of imposing League sanctions against an aggressor nation.

President Roosevelt witnessed the greatest fleet assembled in United States history in tactical maneuvers off San Diego.

3—Italy launched her attack upon Ethiopia from Eritrea; Italian planes bombed Adowa.

May—Gen. Malin D. Craig was appointed Chief of Staff of the U.S. Army.

4—Prime Minister Baldwin announced plans for large-scale rearmament of Britain.

While Italy's northern armies advanced toward Adowa, General Graziani's troops in Italian Somaliland attacked Ethiopia from the south.

5—A neutrality proclamation issued by President Roosevelt prohibited shipments of arms and munitions to Italy and Ethiopia.

Ethiopia invoked Article XVI of the League Covenant, providing for military, economic, and financial sanctions against an aggressor.

Ex-President Hoover attacked the Roosevelt Administration's "huge waste and folly" before the Western States Republican Convention.

6—Italy captured Adowa and Adigrat on the northern front and occupied the Gerlogubi wells on the south.

President Roosevelt warned U.S. citizens that if they traveled on Italian or Ethiopian ships it would be at their own risk.

7—The League Council, with Italy absent, unanimously agreed that Italy had resorted to war in violation of its obligations under the League Covenant.

The U.S. Supreme Court met for the first time in its new building.

8—The Ethiopian Government ordered the Italian Minister at Addis Ababa to leave the country.

9—The New Jersey Court of Errors and Appeals sustained the conviction of Bruno Richard Hauptmann.

10—The member States of the League Assembly voted 51 to 3 that Italy was guilty of aggression in violation of the League Covenant.

Field Marshal Kondylis carried out a monarchist coup in Greece, ousting Premier Tsaldaris, restoring the monarchical constitution, and assuming the powers of Premier and Regent.

11—The Italians captured the holy city of Aksum.

12—Freemasonry was abolished in Turkey.

U.S.-Japanese agreement divided Philippine textile market.

13—Gen. Emilio de Bono at Adowa proclaimed the annexation of the territory occupied by his troops.

Zyndram Kosciolkowski formed a coalition cabinet in Poland.

The Martinez Government in El Salvador executed 26 alleged conspirators.

14—The League members voted a credit blockade of Italy, with Austria and Hungary abstaining.

The Liberals under William Lyon MacKenzie King won a sweeping victory in the Canadian general elections.

16—The British Government rejected Premier Laval's plea that the British fleet be withdrawn from the Mediterranean to aid peace negotiations.

17—Friction within the Austrian Cabinet led to a reorganization in which Emil Fey, Minister of Interior, was eliminated.

18—Helena, Mont., was partly wrecked by a severe earthquake.

19—An Anglo-French understanding on European policy was reached.

The League members, with Austria, Hungary, and Albania abstaining, agreed to shut off imports from Italy, to embargo exports of key war materials to Italy, and to compensate those League States suffering abnormal economic losses from the imposition of sanctions.

General de Bono announced the abolition of slavery in conquered territory in Ethiopia.

20—Secretary of Agriculture Wallace ordered Federal regulation of live poultry industry in New York and New Jersey.

21—A hurricane and floods in Haiti were reported to have killed 2000 persons.

22—The House of Commons reconvened in London. Foreign Secretary Hoare said Britain had no intention of closing Suez Canal or applying military sanctions against Italy.

Danish parliamentary elections were won by Premier Stauning's Social Democratic-Radical government.

President Roosevelt arrived at Charleston, S.C., after a vacation cruise from California via the Panama Canal.

23—Martial law was declared in Kingstown, St. Vincent, B.W.I., after the Negro population engaged in severe rioting.

24—Mussolini withdrew a division of 15,000 men from Libya, lessening the threat of an attack upon Egypt.

Britain invited the U.S., Japan, France, and Italy to a naval conference at London beginning December 2.

25—President Roosevelt announced plans to convert the AAA from an emergency to a permanent basis.

The British Parliament was dissolved and new elections called for November 14.

26—Moral support of League policy in Italo-Ethiopian dispute pledged by United States.

A farmers' referendum showed a six to one vote for continuance of the AAA corn-hog control programme.

27—The first national convention of the Townsend Old-Age Pension Plan adherents closed in Chicago.

28—Hitler repudiated the neo-pagan movement in Germany.

Turkey reported to have offered military support to Britain against Italy in return for Turkish control of fortified Italian islands of the Dodecanese group.

Italian forces in southern Ethiopia completed a 50-mile advance.

The Chaco War was formally terminated by resolution of the Buenos Aires peace conference.

29—Vice President Garner and Speaker I.W. Byrns of the U.S. were received in audience by the Emperor of Japan.

Italy adopted defensive measures against sanctions.

30—Loans of 45 cents per bushel on 1935-36 corn supply authorized by AAA.

President Roosevelt and Secretary of State Hull warned American exporters of war materials not to exceed the normal peace-time shipments to Italy.

31—Anti-British demonstrations broke out in Rome.

November 1—An earthquake rocked a large area in northeastern United States and eastern Canada.

Premier Wang Ching-wei and several pro-Japanese associates were wounded by an assassin at Nanking, China.

The Reich's new universal conscription law went into effect with the drafting of the first class of recruits.

2—Senator Borah launched campaign to prevent return to power of the Republican Old Guard.

3—With republicans boycotting the polls, the Greek plebiscite showed an overwhelming majority for restoration of the monarchy.

4—U.S. silver-buying policy forced China to abandon silver standard and adopt managed currency.

Restrictions on corn-hog production removed by Secretary Wallace to relieve a shortage.

5—Republicans regained control of New York State Assembly and won contests in Philadelphia, Cleveland, and other cities, but were defeated in Kentucky State election.

President Cardenas of Mexico rejected a petition by the Roman Catholic hierarchy for modification of the religious laws.

7—Federal District Judge William C. Coleman of Baltimore held the Holding Company Act invalid.

Soviet Union and Turkey renewed their treaty of friendship.

8—The Italians occupied Makale in northern Ethiopia.

10—George II from London announced his acceptance of the invitation to become ruler of Greece.

11—The U.S. Army Air Corps—National Geographic Society balloon *Explorer II*, with Capt. Albert W. Stevens and Orvil A. Anderson as pilots, soared about 14 miles (72,395 ft.) into the stratosphere from near Rapid City, S.D.

Italy established a government import monopoly.

13—Egypt was swept by a wave of student riots against British control.

Miss Jean Batten, New Zealand aviatrix, completed a solo 1281-mile flight from Dakar, Senegal, to Natal, Brazil.

14—Despite Labor gains, the British general elections retained Prime Minister Stanley Baldwin's Conservative government in power for another five years.

15—President Roosevelt and Prime Minister MacKenzie

King of Canada signed an important reciprocal trade treaty. The Philippine Commonwealth was formally proclaimed at Manila and Manuel Quezon was inaugurated as President.

16—Gen. Emilio de Bono was recalled to Rome and replaced as commander of the Italian armies in northern Ethiopia by Marshal Pietro Badoglio.

17—Demands by the Knights of Columbus that the United States Government intervene to prevent "persecution of religion by the Mexican Government" were rejected by President Roosevelt in an open letter.

18—Economic sanctions voted by 52 League members against Italy went into effect.

19—Mussolini placed all gold transactions by Italians at home and abroad under State control.

20—Communists and Fascist "Gold Shirts" clashed in Mexico, D. F., before the National Palace; 5 were killed and 34 injured.

22—The first transpacific airline was inaugurated by Pan American Airways when the *China Clipper* left Alameda, Calif., for Honolulu. It arrived in Manila, P. I., November 29 after stops at Midway and Wake Islands and Guam.

23—Lincoln Ellsworth and his pilot left Dundee Island for a trans-Antarctic flight.

New Bulgarian cabinet was formed by George Kiosseivanov.

John L. Lewis, president of the United Mine Workers, resigned as Vice President of the American Federation of Labor in split over craft versus industrial unionism.

24—A radical revolution in northeastern Brazil led the government to declare martial law.

As Kuomintang Congress ended its sessions in Nanking, a Japanese-controlled autonomous region under Yin Ju-keng was establishing in 18 Chinese counties south of the Great Wall.

25—King George II landed at Athens and resumed the throne.

Italian invaders of southern Ethiopia reported to have met reverses.

Premier Taschereau's Liberal Government in Quebec retained power by an unexpectedly small majority.

U.S. Chamber of Commerce referendum showed members overwhelmingly opposed to New Deal.

Japan warned British not to interfere in China. The collection of processing taxes on Louisiana rice millers by Federal Government was enjoined by U.S. Supreme Court.

26—Pennsylvania Supreme Court invalidated the State's new graduated income tax.

Clement R. Atlee replaced George Lansbury as British Labor Party leader.

27—Cuban elections were postponed to 1936. Labor party won New Zealand election.

Construction of a \$29,000,000 dam near Guntersville, Ala., authorized by Tennessee Valley Authority.

A new revolutionary outbreak among Brazilian troops at Rio de Janeiro was crushed by the government after severe fighting.

29—U.S. legislation for control of arms and munitions manufacturers went into effect.

The Federal Emergency Relief Administration announced that it had made the final payments to States for direct relief.

30—George N. Peek, a leading spokesman for U.S. agriculture, resigned as president of Export-Import Bank in protest against Canadian-American reciprocal trade treaty.

Works Progress Administration announced that 3,500,000 persons had been transferred from dole to work relief.

Premier Kondylis resigned in Greece in protest against the King's decision to extend amnesty to republican prisoners and fugitives. Constantine Demerdjis formed new ministry.

December 1—With the major U.S. holding companies refusing their cooperation, the deadline was reached for compliance with the Utilities Holding Company Act.

3—Strict regulations to save coal, including shortening of school hours to three daily, went into effect in Italy.

4—Meeting in annual convention at New York City, the National Association of Manufacturers declared "war" on the New Deal.

5—Tentative plans for a transatlantic airmail service were approved at a conference of American, Canadian, British, and Irish Free State officials at Washington.

Secretary of State Hull warned Japan against infringing upon American treaty rights and interests in China.

6—Governor Talmadge of Georgia inaugurated drive to block renomination of President Roosevelt.

Italian planes bombed Dessye and Gondar; at Dessye, where 80 were reported killed and 200 injured, bombs wrecked Emperor Haile Selassie's palace and a hospital operated by the Seventh Day Adventists.

Former Gov. William Langer of North Dakota was acquitted of perjury charges by a Bismarck jury.

7—Poll of 10,000 U.S. manufacturers showed 82 per cent opposed to continuance of NRA.

Freeing Angelo Herndon, Negro Communists sentenced

to life imprisonment, Georgia Superior Court held State Anti-Sedition Law of 1866 unconstitutional.

9—The five-power naval conference opened at London, with the United States proposing a 20 per cent reduction in all fleets.

Walter Liggett, publisher of a Minneapolis, Minn., newspaper, was assassinated.

10—President Mendieta of Cuba resigned to pave the way for new elections.

The U.S. Treasury withdrew its support of the world silver market and prices collapsed.

Hoare-Laval peace proposals were approved by British Cabinet.

12—The 1923 Constitution was restored in Egypt to calm riots.

An autonomous régime was established in Hopei and Chahar, North China, under Japanese pressure.

The London Naval Conference rejected Japan's demand for equality with Britain and the United States.

Irish Free State Dail voted to abolish the Senate.

13—Publication of the Hoare-Laval peace proposals at Geneva aroused a storm of criticism.

Former President Calles returned to Mexico amid hostile demonstrations by labor organizations.

Japanese troops occupied Kalgan in Inner Mongolia.

14—Manuel Portela Valadares formed a new Spanish cabinet.

President Masaryk of Czechoslovakia resigned.

17—Gen. Juan Vicente Gomez, dictator of Venezuela, died.

The Greek parliament was dissolved and new elections called.

18—Sir Samuel Hoare resigned as British Foreign Secretary. Edouard Herriot withdrew as leader of French Radical Socialists.

Eduard Beneš was elected President of Czechoslovakia to succeed Masaryk.

U.S. national debt climbed to \$30,555,791,967.

19—Former Gov. William Langer of North Dakota and two associates were acquitted on charge of conspiring to obstruct Federal relief legislation.

British House of Commons upheld Prime Minister Baldwin in the face of criticism against his part in the Hoare-Laval peace plan.

22—Capt. Anthony Eden was appointed British Foreign Secretary.

British Government established a legislative council for Palestine over Jewish objections.

Reciprocal trade treaty between the United States and the Netherlands published.

23—An executive order of President Roosevelt called for dissolution of the NRA on January 1.

26—The Japanese Diet convened at Tokyo.

27—Viscount Saito was appointed chief adviser to Emperor Hirohito.

Uruguay severed diplomatic relations with Soviet Union, charging that Soviet Minister at Montevideo disseminated Communist propaganda.

28—Premier Laval's foreign policy was approved by French Chamber by narrow margin. Parliament approved a law for disarming the Croix de Guerre and other armed private organizations.

30—Great Britain intervened in Memel dispute in effort to lessen German-Lithuanian tension.

The Spanish cabinet was again reorganized.

31—Gen. Lopez Contreras elected President of Venezuela.

CINCINNATI, UNIVERSITY OF. An institution for the higher education of men and women in Cincinnati, Ohio, founded in 1870. The registration in the autumn of 1935 was 9373. The summer school enrollment for 1935 was 755. There were 626 members on the faculty. The endowment funds for the year ending June 30, 1935, amounted to \$9,109,735; the income for the same period was \$2,278,829. The library contained 370,123 volumes. President, Raymond Walters, A.M., Litt.D., LL.D.

CIRENAICA. See LIBYA.

CITROEN, sé'trô'ân', ANDRÉ GUSTAV. A French industrialist, died in Paris, July 3, 1935. Born in that city on Feb. 5, 1878, he was educated at the Lycée Condorcet and the École Polytechnique. About the year 1908, when he was head of a small gear-cutting shop, a group of financiers asked him to lend his engineering ability to the bettering of a small car called the Mors. So successful was he that production jumped from 200 to 1200 cars a month. At the outbreak of the World War, he served for a time with the engineers, and then persuaded the War Department to enter the field of munitions-making on a large scale. Backed

by a government subsidy, he sent engineers to the United States to purchase the necessary machinery, and soon the arsenal at Roanne was producing 55,000 "whiz-bang" shells every day, in addition to shells of larger calibre. He also provided the Government with a programme of fuel distribution and designed a rationing system of bread and sugar cards for the civil population.

At the close of the War, M. Citroen found himself in command of a large factory and many employees. He was undecided whether to manufacture sewing-machines or automobiles. He decided on the latter and plans for a low-priced car were advertised. Orders flowed in and even though the price of 7900 francs (then \$1000) was found to be too low and had to be raised, the demand was not lessened. The first car made was of 10 horsepower with two seats in front and one in the rear. By 1924 his factories turned out 400 a day, and in 1929, the peak year, 120,000 cars were produced. Two types of car were manufactured: a small 4-cylinder car and a 6-cylinder flivver, both light and cheap to operate.

Citroen was called the "French Henry Ford" because of the many ideas, particularly in connection with mass production and the advertising field, that he borrowed from that manufacturer. His most famous advertising exploit was accomplished in 1925, when he persuaded the officials of the Exposition of Decorative Arts, who were desirous of lighting the Eiffel Tower but had no money to do so, to allow him to place a huge electric sign reading "Citroen" on the Tower and so illuminate it. At the close of the Exposition the sign was allowed to remain on the payment of a yearly fee.

M. Citroen was essentially a gambler, and it was this gambling instinct that led to the downfall of the Citroen Motor Works. During the years of the depression when most firms were retrenching, the Citroen Works expended large amounts of money in new plants and machinery, and in view of the fact that sales were decreasing, it was not long before the firm began to feel financial difficulties. In addition, labor troubles added fuel to the fire. In 1934 the catastrophe occurred and on December 2, La Société André Citroen went into liquidation. The Government and the Michelin tire interests stepped in and on Jan. 5, 1935, the Company reopened its doors on a greatly reduced basis, and André Citroen was deposed as the ruler.

In 1932, Citroen and the National Geographic Society backed the George-Marie Haardt Expedition, which in February of that year completed an 8000-mile motor caravan journey from Beirut to Peiping. He also sponsored the Citroen Central African Expedition to open the first trade trail to the hidden jungle cities of Africa. His motor cars, equipped with caterpillar wheels, made their way over impassable country from Algeria to Cape Town, and although his dream of a regular route across the Continent of Africa never materialized, it did show the hardihood of the Citroen motor car.

CITY, REGIONAL, STATE, AND NATIONAL PLANNING. Merger of the National Conference on City Planning and the American Civic Association as the American Planning and Civic Association has been effected. *The American Planning and Civic Annual* takes the place of the yearly volumes published by the two bodies. *Planning and Civic Comment* supersedes *The City Planning Quarterly*, *Civic Comment* and *State Recreation*. At the National Planning Conference in May resolutions favoring a permanent national

planning board and a new federal bureau to gather and publish information on urban conditions and problems were adopted. The fact was stressed that the growth of suburban areas is outrunning that of cities, with a consequent need for planning readjustment.

Billboard Decision. Massachusetts legislation vesting the regulation of billboards in the State Department of Works was upheld by the Massachusetts State Supreme Court on Jan. 10, 1935 (Gen. Outdoor Advg. Co., Inc., and others, vs. Dept. of Works, 193 N. E., 789; for digests see *Planning and Civic Comment*, Jan.-Mar.; *The American City*, Feb.; and for a longer digest, *Public Roads* for March).

City, County, and Regional Commissions. The National Resources Committee, successor to the National Planning Committee, reported for the New INTERNATIONAL YEAR BOOK on November, 18, that no information on planning commissions later than the Eleventh Circular Letter (May 15, 1934) had been published but that unofficial information indicated that since receipt of the data supplied for the letter about 100 city and 350 county and regional planning commissions had been created. This brings the total number of commissions of the three classes from 824 (1934 INTERNATIONAL YEAR BOOK) to 1274, or to 1200, allowing for discontinuances. A new survey at an early date was proposed. Nearly all of the 48 American States have taken some action on State planning, either by statute or by boards appointed by governors.

The Tennessee legislature of 1935 passed six planning and zoning acts. One of them created a commission with power to make a State plan and to form planning regions and commissions. Another act enables any city in the State to create planning commissions, instead of compelling each city to obtain an enabling act. Other acts authorize city, county, and regional zoning.

International Congress. The world-wide interest in planning is shown by the fact that the 14th International Congress of the Federation for Housing and Town Planning, held at London in July, was attended by 931 delegates from 47 countries.

State Parks. "Since Emergency Conservation Work began, more than 115 new State parks were established and additions were made to 43 established parks." The new areas total about a half million acres. (For details, see *Planning and Civic Comment*, Jan.-Mar. 1935.)

England and Wales. The status of town planning in England and Wales, as of Mar. 1, 1935, was detailed in *Town and County Planning* (London) for June, 1935. Supplementary data appear monthly.

Bibliography. Adams, *Outline of Town and City Planning* (New York); Bassett and others, *Model Laws for Planning Cities* (Cambridge, Mass.); Schwan, *Town Planning and Housing Throughout the World* (text French, German, and English; London).

CIVIL ENGINEERS, AMERICAN SOCIETY OF. An association of professional engineers, founded in 1852 to advance engineering and architectural knowledge and practice, to maintain high professional standards, and to encourage intercourse among men of practical science.

The membership as of Dec. 26, 1935, consisted of 18 honorary members (persons of acknowledged eminence in engineering), 5698 members (civil, military, naval, mining, mechanical, electrical, and other engineers in active practice 12 years

and qualified to design as well as to direct engineering work), 6087 associate members (those who have been practicing eight years), 3034 juniors (beginners in the profession), 99 affiliates (persons qualified to cooperate with engineers but not themselves engineers), and four fellows (contributors to the permanent funds of the society who may not be eligible to membership). There were 57 local sections and 113 affiliated student chapters in colleges and universities throughout the United States.

The sixty-fifth annual convention was held in Los Angeles, Calif., July 3-7, 1935. The general topic of discussion was the contribution of engineering to the development of California. The fall meeting took place in Birmingham, Ala., Oct. 16-19, 1935, and considered the past and future development of the Southeastern States. At both these meetings the various technical divisions also presented papers dealing with their special fields of work.

The society publishes two monthly magazines: *Civil Engineering*, which presents news of society affairs and articles of more popular appeal; and *Proceedings*, which contains technical papers that are later collated, with discussions, in the yearly volume of *Transactions*. At the annual meeting held in New York City, Jan. 16-19, 1935, there were awarded medals and prizes for papers published in the *Transactions* for 1934. These included the Norman Medal to Leon S. Moisseiff, the J. James R. Croes Medal to H. M. Westergaard, the Thomas Fitch Rowland Prize to Miles A. Killmer, the James Laurie Prize to E. Warren Bowden and H. R. Seely, the Arthur M. Wellington Prize to J. C. Evans, and the Collingwood Prize for Juniors to G. H. Hickox and G. O. Wessenauer.

The officers of the society in 1935 were: Pres., Arthur S. Tuttle; vice-presidents, Henry D. DeWitt, John P. Hogan, Henry E. Riggs, and D. H. Sawyer; secretary, George T. Seabury; treasurer, Otis E. Hovey. Headquarters are in the Engineering Societies Building, 33 West Thirty-ninth Street, New York City.

CIVILIAN CONSERVATION CORPS. See CHILD WELFARE; FORESTRY; UNIVERSITIES AND COLLEGES.

CIVIL SERVICE REFORM LEAGUE, NATIONAL. Organized in 1881 for the purpose of putting to an end the so-called spoils system of making appointments to public office, this organization has sought to accomplish its end by promoting administrative efficiency through the application of the merit system to the appointment, promotion, and tenure of government officials. It also has advocated, on the principle that public office is a public trust, that those best fitted through demonstrated ability and capacity should serve the State.

During 1935 the league urged the competitive classification, under the civil service law, of positions in the new government agencies to carry out the administration's recovery programme. It protested against legislation and executive orders returning to the exempt or politically-appointed class groups of positions, which had in previous years been removed therefrom. It also protested against demands upon Federal employees for campaign contributions and political services. It urged that an end be made of appointment of presidential postmasters on a political basis and vigorously opposed the use of Federal offices to reward unqualified party workers.

Good Government is the league's official organ.

The officers in 1935 were: George McAneny, president; W. W. Montgomery, Jr., chairman of the executive committee; Howard R. Guild, chairman of the council; Ogden H. Hammond, treasurer; and H. Eliot Kaplan, secretary. Headquarters are at 521 Fifth Avenue, New York City.

CIVITAN INTERNATIONAL. An organization composed of selected professional and business men throughout the United States and Canada, who have dedicated themselves to unselfish service to their city, county, State, and Nation. The first Civitan Club was founded in Birmingham, Ala., in 1917, the name being formed from the Latin "civitas." A total of 300 clubs had been chartered by Nov. 1, 1935.

The 1935 Convention was held in Miami, Fla., June, 16-19. The official organ is *The Civitan* (monthly). The officers for 1935 were: President, Judge Arthur Crownover, Nashville, Tenn.; vice-presidents, C. Francis Cowdrey, Jr., Fitchburg, Mass.; Fred W. Halls, Toronto, Canada; Dr. Wingate M. Johnson, Winston-Salem, N. C.; Frank E. Lautz, Miami, Fla.; and Wm. M. West, Denver, Colo.; international secretary, Arthur Cundy, Birmingham, Ala.; and international treasurer, Herbert Porter, Atlanta, Ga. Headquarters are 803-4 Farley Bldg., Birmingham, Ala.

CLARK UNIVERSITY. A nonsectarian university in Worcester, Mass., founded in 1889. The registration for the autumn of 1934 was 375. The enrollment for the summer session was 150. There were 39 members on the faculty. The productive funds amounted to approximately \$5,000,000. The library contained 149,000 volumes. President, Wallace W. Atwood, Ph.D.

CLEVELAND. See MUSIC.

COAL. According to preliminary statistics of coal production in 1935, based on railroad carloadings and river shipments, the U.S. Bureau of Mines estimates the output in the United States at a total of 420,327,000 tons, an increase of less than 1 per cent over the total output in 1934, as shown in the table on page 155. Of the total production, bituminous coal with 369,324,000 tons showed an increase of almost ten million tons over the previous year; anthracite, with 51,003,000 tons, a decline of more than six million tons. The gain in bituminous production was distributed generally, with few exceptions, among the several States, as shown in the table.

By comparison with earlier years the total output, though almost 71 million tons greater than in the low year of 1932, is less by 21 million tons than in 1931, by 116 million tons than in 1930, and by almost 238 million tons than in 1923.

Throughout the first nine months of the year, the bituminous coal industry was threatened with a destructive strike. In February, representatives of the United States Mine Workers proposed a new contract to succeed the one that was to end on March 31 with provision for a 30-hour week and for specified wage increases. Failure to reach agreements with the operators brought repetitions of strike orders through the year to the 400,000 miners, each successive order being rescinded at the eleventh hour by the request of President Roosevelt. The Guffey-Snyder Coal Act (see UNITED STATES under *Administration*), which aimed to stabilize the industry through Federal Commissions, though finally passed by the Congress in August and signed by the President, was immediately protested by the operators as an invasion of Constitutional rights, and at the close of the year had not yet been passed upon by the U.S.

**COAL PRODUCED IN THE PRINCIPAL COUNTRIES OF THE WORLD IN THE CALENDAR YEARS
1933, 1934, AND 1935, IN THOUSAND METRIC TONS***
[Prepared by R. B. Miller, U. S. Bureau of Mines]

Country	1933	1934	1935 ^a	Country	1933	1934	1935 ^a
North America:				Europe—Continued			
Canada—				Spain—			
Coal	8,533	9,613	9,340	Coal	5,999	5,932	7,016
Lignite	3,370	2,916	3,237	Lignite	301	299	304
United States—				United Kingdom—			
Anthracite	44,943	51,862	46,269	Great Britain	210,436	224,269	226,519
Bituminous and lignite .	302,663	326,011	335,043	U S S R. (Russia)—			
Other countries	652	787	1,148	Coal	66,000	71,268	82,100
South America:	2,248	2,391	(^b)	Lignite			
				Other countries ...	12,359	12,955	(^b)
Europe:				Asia:			
Belgium	25,300	26,389	26,483	China	(^b)	(^b)	(^b)
Czechoslovakia—				India, British	20,107	20,429	22,000
Coal ..	10,532	10,687	10,964	Japan (inc. Taiwan and			
Lignite	15,063	15,172	15,226	Karafuto)—			
France—				Coal ..	34,575	38,300	(^b)
Coal	46,887	47,607	47,107	Lignite ..	116	125	(^b)
Lignite ..	1,093	1,031	900	Other countries ..	16,810	27,172	(^b)
Germany— ^c				Africa:			
Coal ..	109,692	124,910	134,100	Southern Rhodesia	484	643	694
Lignite ..	126,794	135,995	147,380	Union of South Africa ...	10,714	12,195	13,574
Saar ^d ..	10,561	11,318	10,618 ^e	Other countries	332	367	(^b)
Hungary—				Oceania:			
Coal .	800	756	7,540	Australia—			
Lignite ..	5,907	6,199		New South Wales ...	7,233	8,000	8,636
Netherlands—				Other States	4,626	4,618	(^b)
Coal ..	12,574	12,341	11,879	New Zealand—			
Lignite ..	97	92	90 ^f	Coal	857	845	(^b)
Poland—				Lignite	993	1,248	(^b)
Coal ..	27,356	29,233	28,534	Total	1,174,000	1,273,000	1,314,000
Lignite ..	33	26	18 ^f				

* One metric ton equivalent to 2,204.6 pounds. ^b Estimate included in total. ^c Exclusive of mines in the Saar under French control. ^d Mines under French control. ^e Mines under French control January and February. Returned to Germany March 1 as the result of the plebiscite. ^f Preliminary—subject to revision. [†] Approximate production.

**PRELIMINARY STATISTICS OF COAL PRODUCTION IN 1935 ARRANGED BY STATES, WITH
FINAL FIGURES FOR 1934**
[Net tons]

State	1934	1935
Alaska	107,508	90,000
Alabama	9,142,117	8,412,000
Arkansas	856,432	
Oklahoma	1,208,289	2,570,000
Colorado	5,210,933	5,872,000
Illinois	41,272,384	43,845,000
Indiana	14,793,643	15,440,000
Iowa	3,366,992	3,468,000
Kansas	2,508,254	
Missouri	3,352,283	6,104,000
Kentucky—		
Eastern	30,310,456	32,358,000
Western	8,214,779	8,120,000
Maryland	1,627,112	1,650,000
Michigan	621,741	550,000
Montana	2,565,702	2,990,000
New Mexico	1,259,323	1,382,000
North Dakota	1,753,888	1,872,000
South Dakota	42,407	38,000
Ohio	20,690,564	20,610,000
Pennsylvania bituminous ..	89,825,875	90,795,000
Tennessee	4,135,790	4,110,000
Georgia	32,716	40,000
North Carolina	5,140	
Texas	759,289	760,000
Utah	2,406,183	2,985,000
Virginia	9,376,681	9,915,000
Washington	1,382,991	1,575,000
West Virginia	98,134,393	98,589,000
Wyoming	4,367,961	5,150,000
Other States ^a	38,196	34,000
Total bituminous coal	359,368,022	369,324,000
Pennsylvania anthracite ^b ..	57,168,291	51,003,000
Grand Total	416,536,313	420,327,000

^a Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon. The States reporting are not identical in every year. ^b Includes Sullivan County, washery and dredge coal, local sales, colliery fuel, and coal shipped by truck from authorized operations.

Supreme Court. Hence, on September 23, the long deferred strike became effective. It lasted six days. On September 26, a compromise contract was signed by operators and miners to remain effective until Apr. 1, 1937. The new contract retains the former 35-hour week, but grants a basic day-worker rate of \$5.50 in the Appalachian area, a 9-cent per ton increase for tonnage men as against the 15-cent increase demanded, a 10 per cent increase for "dead work" as against the demand for double that increase, and an increase of 9 cents a ton for pick mining.

COCHIN-CHINA. See FRENCH INDO-CHINA.
COCOS or KEELING ISLANDS. See STRAITS SETTLEMENTS.

CODES. See UNITED STATES under *Administration*.

CODLING MOTH. See ENTOMOLOGY, ECONOMIC.

COINS, VALUE OF FOREIGN. The legal estimates of the value of foreign coins on Jan. 1, 1936, as issued by the U. S. Secretary of the Treasury, are given on the table on page 156.

COKE. According to the preliminary report of the U. S. Bureau of Mines the total production of coke in 1935 was 35,209,240 net tons, a rise of 10.6 per cent over the production in 1934, of 31,821,576 net tons. Of the year's output, 936,200 net tons were beehive coke (1,028,765 net tons in 1934) and 34,273,040 net tons were by-product coke (30,792,811 net tons in 1934).

COLGATE UNIVERSITY. A nonsectarian institution for the higher education of men in Hamilton, N. Y., founded in 1819. In the autumn of 1935 there were 1042 students enrolled. The faculty numbered 107 members. The productive funds amounted to approximately \$6,500,000, and the income for the year was \$638,000. The library con-

VALUES OF FOREIGN MONEYS—JAN. 1, 1936

Country	Legal standard	Monetary unit	U. S. money	Remarks
Argentine Republic	Gold	Peso	\$1.6335	Paper convertible at 44% of face value.
Austria	Gold	Schilling	.2382	
Belgium	Gold	Belga	.1695	1 belga equals 5 Belgian paper francs.
Bolivia	Gold	Boliviano	.6180	13½ bolivianos equal 1 pound sterling
Brazil	Gold	Milreis	.2025	Currency: Government paper; ratio of 8 paper to 1 gold milreis for collection of taxes and duties, Nov. 22, 1933.
British Colonies in Australasia and Africa	Gold	Pound Sterling	8 2397	
British Honduras	Gold	Dollar	1.6931	
Bulgaria	Gold	Lev	.0122	
Canada	Gold	Dollar	1.6931	
Chile	Gold	Peso	.2060	
China	Silver	Yuan, to March, 1933	.4870	The Yuan of 100 fen is the monetary unit minted by the Central Government of the Republic.
	(Values are estimated market values, in gold, of silver content of units.)	Yuan, of Mar. 3, 1933	.4786	
		Dollar { Hong Kong } { British } { Mexican }	.4943	
Colombia	Gold	Peso	1 6479	Mexican dollars issued before 1918
Costa Rica	Gold	Colon	.7879	Currency: Government paper and silver
Cuba	Gold	Peso	1 0000	Law establishing conversion office fixes ratio 4 colons (nongold) = \$1.
Czechoslovakia	Gold	Koruna	.0418	By law of May 25, 1934.
Denmark	Gold	Krone	.4537	Effective Feb 17, 1934.
Dominican Republic	Gold	Dollar	1.6931	U S money is chief circulating medium
Ecuador	Gold	Sucre	.3386	
Egypt	Gold	Pound (100 piasters)	8 3692	
Estonia	Gold	Kroon	.4537	
Finland	Gold	Markka	.0426	
France	Gold	Franc	.0663	
Germany	Gold	Reichsmark	.4033	
Great Britain	Gold	Pound Sterling	8 2397	Obligation to sell gold at legal monetary par suspended, effective Sept 21, 1931
Greece	Gold	Drachma	.0220	
Guatemala	Gold	Quetzal	1.6931	
Haiti	Gold	Gourde	.2000	Currency: National bank notes redeemable on demand in American dollars
Honduras	Gold	Lempira	.8466	Lempira circulates as equal to ½ U S \$
Hungary	Gold	Pengo	.2961	
India (British)	Gold	Rupee	.6180	
Indo-China	Gold	Piaster	.6633	
Italy	Gold	Lira	.0891	
Japan	Gold	Yen	.8440	
Latvia	Gold	Lat	.3267	
Liberia	Gold	Dollar	1 6931	British money only is used.
Lithuania	Gold	Litas	.1693	
Mexico	Gold	Peso	.8440	By law of July 25, 1931, gold has no legal tender status but it may be held as monetary reserve for use in foreign exchange operations
Netherlands and colonies	Gold	Guilder (florin)	.6806	
Newfoundland	Gold	Dollar	1 6931	
Nicaragua	Gold	Cordoba	1.6933	
Norway	Gold	Krone	.4537	
Panama	Gold	Balboa	1 6933	
Paraguay	Gold	Peso (Argentine)	1 6335	Paraguayan paper currency used
Persia (Iran)	Gold	Rial	.0824	Rial currency effective Mar 21, 1932, 1 rial equals 1 kran of old system
Peru	Gold	Sol	.4740	
Philippine Islands	Gold	Peso	.5000	By act approved Mar. 16, 1935.
Poland	Gold	Zloty	.1899	
Portugal	Gold	Escudo	.0748	
Rumania	Gold	Leu	.0101	
Salvador	Gold	Colon	.8466	
Siam	Gold	Baht (Tical)	.7491	
Spain	Gold	Peseta	.3267	Currency is notes of the Bank of Spain.
Straits Settlements	Gold	Dollar	.9613	
Sweden	Gold	Krona	.4537	
Switzerland	Gold	Franc	.3267	
Turkey	Gold	Piaster	.0744	(100 piasters equal to the Turkish £)
U.S.S.R. (Russia)	Gold	Chervonetz	8 7123	
Uruguay	Gold	Peso	1 7511	Currency: Inconvertible paper.
Venezuela	Gold	Bolivar	.3267	
Yugoslavia	Gold	Dinar	.0298	

tained 110,000 volumes. President, George Barton Cutten, Ph.D., D.D., LL.D.

COLLEGES. See UNIVERSITIES AND COLLEGES.

COLOMBIA. A South American republic, third in population and fifth in area among the republics of that continent. Capital, Bogotá.

Area and Population. With an area of 447,536 square miles, Colombia had an estimated population on Jan. 1, 1935, of 9,225,000 (7,851,000 at 1928 census). According to the 1928 census, 35 per cent of the population is white, 5 per cent Negro, 2 per cent Indian, and 58 per cent of mixed blood. The

urban population is 31 per cent of the total. The principal cities, with their estimated 1933 populations, are: Bogotá, 264,607; Medellín, 145,880; Barranquilla, 129,715; Cartagena, 122,944; Cali, 104,232; Manizales, 100,645; Ibagué, 71,370; Cúcuta, 64,372. Roman Catholicism is the state religion. Incomplete vital statistics for 1933 showed living births numbering 223,878; deaths, 122,400; marriages, 32,491.

Education. Illiteracy declined from 68 per cent of the total population over 10 years of age in 1918 to 51.57 per cent in 1928. Primary education is free but not compulsory. In 1933, out of 1,538,948 chil-

dren of school age, 513,775 were in 7222 public schools and 230,847 in various private schools. In 1931 there were 25 industrial schools, 17 normal schools, and 6 art schools. There are two national universities—at Bogotá and the School of Mines at Medellín—and departmental universities at Medellín, Cartagena, Popayan, and Pasto. By the law of Dec. 17, 1934, at least 10 per cent of all receipts of the central government must be devoted to education.

Production. Agriculture and mining, the principal occupations, provided about 75 and 22 per cent, respectively, of the value of all exports in 1933. Coffee and bananas are the chief export crops. For the year ended June 30, 1935, coffee exports totaled 3,126,092 bags of 60 kilos (132 lb.), compared with 3,464,328 bags exported in 1933-34. The total coffee crop in 1934-35 amounted to 3,300,000 bags. Banana exports in the calendar year 1934 totaled 7,668,000 stems, valued at 6,122,000 pesos, against 6,946,000 stems, valued at 4,908,000 pesos, in 1933. Output of other crops (1934) was: Sugar, 660,000 bags (of 110 lb.); cotton, 3,527,000 lb. of clean fibre; wheat, 2,572,000 bu.; corn, 19,684,000 bu.; potatoes, 7,349,000 bu.; cacao, 22,046,000 lb.; rice, 132,276,000 lb.; tobacco, 17,637,000 lb.; pita fibre, 22,046,000 lb. Stock raising is important; in 1932 there were 7,592,020 cattle, 1,544,617 swine, 830,807 sheep, 925,733 horses, 453,232 mules, and 288,445 asses. The forests, covering some 150,000,000 acres, yield rubber and cedar, dye, and cabinet woods.

The chief minerals and the 1934 output (1933 figures in parentheses) were. Petroleum, 17,299,000 bbl. (13,154,000); gold, 344,140 troy oz. (298,242); silver, 125,884 troy oz. (107,743); platinum, 45,971 troy oz. in 1933; coal, 200,000 metric tons in 1933. Platinum exports in 1934 were 1703 kilograms. Colombia's emerald mines are famous. The adoption of a protective tariff in 1931 was followed by a rapid expansion of domestic industries. Manufactured production in 1934 was reported as 50 to 80 per cent greater than in 1933, and some 300,000 persons were employed in factories at the end of the year. The value of industrial production in 1934 was 88,791,626 pesos.

Foreign Trade. Imports in 1934 totaled 87,559,297 pesos (49,666,529 in 1933) and exports, excluding gold bullion and specie, totaled 123,891,170 pesos (67,586,315 in 1933). The depreciation of Colombia currency and important changes in prices for export products accounted in part for the increases of 76 and 89 per cent in the value of imports and exports, respectively, in 1934. The United States supplied 43.9 per cent of the 1934 imports (36.8 per cent in 1933) and purchased 64.1 per cent of the exports (67.6 in 1933). Great Britain and Germany were the other principal sources of imports and France, Canada, Netherlands India, and Germany were the other main export markets. The value of the leading export products in 1934 (in 1000 pesos) was: Coffee, 82,460; petroleum, 28,162; gold, 13,829; bananas, 6122; cattle hides, 2870; and platinum, 2812.

Imports in 1935 totaled 106,854,000 pesos and exports were 123,602,000 pesos (preliminary), excluding gold shipments. United States figures showed imports from Colombia in 1935 of \$50,443,195 (\$47,115,152 in 1934) and exports to Colombia of \$21,636,065 (\$21,942,772 in 1934).

Finance. Ordinary revenues of the Central Government in 1934 totaled 45,563,000 pesos and ordinary expenditures were 42,753,000 pesos, leaving a surplus of 2,810,000 pesos. Extraordinary expenditures totaled 24,376,000 pesos and extraordi-

nary revenues were 23,923,000 pesos, raised, mainly for national defense purposes, through credit operations and bond issues. Exclusive of unpaid service charges on the foreign debt, there was a fiscal deficit of 18,902,557 pesos at the end of 1934. Including this deficit, the public debt on Dec. 31, 1934, totaled 170,166,096 pesos (foreign long-term debt, 66,106,898; internal debt, 54,206,851; banking debt and miscellaneous, 30,949,769). The total debt on Dec. 31, 1933, was 151,376,864 pesos.

The 1935 budget estimates placed ordinary revenues at 44,140,000 pesos and ordinary expenditures at 42,844,365 pesos. In addition appropriations aggregating 11,451,191 pesos were carried in various special budgets. The average exchange value of the Colombian peso (par \$0.9733) was \$0.9530 in 1932, \$0.8032 in 1933, and \$0.6152 in 1934.

Communications. The Magdalena River, navigable to 500-ton vessels for 514 miles from Barranquilla, is Colombia's main traffic artery. Railway lines in 1933 extended 1980 miles, divided among 11 national and 3 British companies, and some 1400 miles were under construction. The President reported in June, 1935, that the road construction programme launched in 1931 was 60 per cent completed, with 2635 miles finished. Ten air lines, covering some 2400 miles of routes, were in operation.

Government. Executive power is vested in a President elected for four years by direct popular vote; he is ineligible for reelection for four years after completion of his term. A Congress of two houses exercises the legislative power. The 56 members of the Senate are elected for four years by Departmental Assemblies and the 118 Deputies forming the House of Representatives are elected for two years by direct suffrage. President in 1935, Dr. Alfonso López (Liberal), who assumed office Aug. 7, 1934.

HISTORY

Leticia Protocol Ratified. Ratification of the Leticia Protocol by the Colombian Congress on Sept. 17, 1935, finally liquidated the menacing controversy with Peru over the Leticia corridor which brought the two countries to the verge of war during 1932-33. Congressional approval of the treaty, signed by the plenipotentiaries of Colombia and Peru at Rio de Janeiro on May 24, 1934, was secured only after a hard-fought political struggle between the Liberal Government and the opponents of the treaty, headed by the Conservatives. The Peruvian Congress ratified the protocol on Nov. 2, 1934, but the Colombian Senate, in which the Conservative Opposition held a majority, refused its consent, despite the urgings of President López and the appeals of the United States and Brazilian Governments. Unable to win over the Opposition, President López in January dissolved the special session of Congress called to ratify the treaty and appealed to the country for the election of a new Congress. Shortly afterwards he secured Peru's consent to the extension until Nov. 30, 1935, of the time limit for ratification of the protocol, which had expired on Dec. 31, 1934. He also reorganized the cabinet, appointing former President Olaya Herrera, under whom the Leticia Protocol had been negotiated, to the key post of Foreign Minister.

While ratification of the treaty with Peru was the main issue in the ensuing political campaign, the Liberals also faced vigorous opposition to their programme of political and social reform. President López, an able banker and financier, declared

that under the existing tax system the wealthy did not pay their share of the cost of government. He promised the lower classes that under Liberal rule the rich would "learn what taxes are and what they mean." This threat, combined with the liberal record of the government with regard to labor and social legislation, led the privileged classes to organize an association, known as the *Accion Patriótica Económica Nacional*, to protect the rights of capital and property. The Conservatives boycotted the elections on the ground that the Liberals would prevent the free expression of the voters' choice. They threw much support, however, to the *Accion Patriótica Económica Nacional*, which actively entered the Congressional contest.

The elections to the Chamber of Deputies on May 26 gave the Liberals 105 out of 118 seats. Independent Liberals won 10 seats, the Communists 2, and the Socialists 1. Elections to the Senate, held in the State Assemblies in June, gave the Liberals control of that body also. With its approval insured, the Leticia Protocol was reintroduced in Congress and ratified after a long and heated debate during which Foreign Minister Olaya Herrera challenged former Supreme Court Justice José Miguel Arango to a duel for his criticism of the pact. While the Leticia Protocol was awaiting ratification a mixed Colombian-Peruvian commission, provided for in the treaty, studied the problem of demilitarizing the Amazon frontier and of carrying out the other provisions of the agreement.

Other Issues. The session of Congress which opened July 20, 1935, at the insistence of President López undertook to revise the Constitution so as to permit needed reforms affecting private property rights and judicial procedure. On Apr. 12, 1935, the Supreme Court had declared unconstitutional two laws raising income and capital taxes, passed by the López Government in December, 1934. The curbing of the Supreme Court's powers was therefore considered essential to the success of the Liberal reform movement. In his message to Congress President López also called for the wider distribution of agricultural land, which was largely in the hands of a comparatively small but wealthy group; improvement of agricultural methods, reform of the educational system so as to provide more technicians and fewer lawyers and physicians; development of credit facilities for the expansion of agriculture, industry, and mining with local capital; further depreciation of the peso to redress the unfavorable balance of payments; modification of the oil law; and additional legislation regulating strikes, labor contracts, and unions. Congress was still considering most of these measures at the end of 1935. Before recessing on December 23, Congress passed an act raising income-tax rates and creating an excess-profits levy and a patrimonial impost. It also approved the budget for 1936, with ordinary revenues and expenditures calculated at 68,684,000 pesos.

The introduction of such legislation aroused strong protests from the coffee planters and other interests and served to further a business recession which became apparent in the first quarter of the year. The decline of coffee prices, however, was undoubtedly the chief stimulus to this recession. Despite the government's measures, the deep-seated discontent among the laboring classes continued to manifest itself in frequent strikes and occasional minor disorders. Like most of the Latin American countries, Colombia sought to solve some of its pressing economic and financial prob-

lems by securing new foreign markets for its products. A reciprocal trade agreement was signed with the United States on Sept. 13, 1935, in which the American Government agreed to continue the tariff and other exemptions which most Colombian products enjoyed in the United States. In return, Colombia agreed to reduce its customs duties on an important percentage of products imported from the United States, and not to increase its tariff duties or other prohibitions or financial imposts upon other American products. Negotiations for a similar treaty were under way with Japan, whose exports to Colombia in 1934 showed a four-fold increase over the previous year.

The newly established National Economic Council began to function in May, 1935, providing an agency through which business interests and government officials might cooperate in the development of the national economy. By the law of July 30, 1935, the government was authorized to withdraw silver coins from circulation, prohibit the exportation of silver, and use the profits accruing from the exchange of notes of the Bank of the Republic for the retired coins. The exchange control system, in effect since September, 1931, was made somewhat more rigorous early in 1935. The exchange Control Board reported that during 1934 it received 76,467,000 dollars in exchange and allocated 77,911,000 dollars. American frozen credits in Colombia on Jan. 1, 1935, were estimated at \$5,000,000.

COLORADO. Population. On Apr. 1, 1930 (Fifteenth Census), 1,035,791; July 1, 1934, by latest Federal estimate, 1,056,000; 1920 (Census), 939,629. Denver, the capital, had (1930) 287,861 inhabitants; Pueblo, 50,096.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) ..	1935	1,099,000	1,801,000 ^a	\$11,706,000
	1934	960,000	1,164,000 ^a	13,968,000
Sugar beets ..	1935	142,000	1,817,000 ^a	
	1934	169,000	1,566,000 ^a	7,893,000
Corn	1935	1,558,000	12,464,000	8,725,000
	1934	842,000	3,368,000	3,267,000
Wheat	1935	504,000	5,952,000	5,341,000
	1934	650,000	5,776,000	4,869,000
Potatoes	1935	84,000	15,120,000	9,072,000
	1934	76,000	5,700,000	3,363,000
Dry beans .	1935	465,000	1,256,000 ^b	3,705,000
	1934	186,000	279,000 ^b	1,534,000
Barley	1935	302,000	5,436,000	2,392,000
	1934	189,000	3,021,000	1,966,000
Oats	1935	131,000	3,406,000	1,192,000
	1934	97,000	2,280,000	1,186,000

^a Tons. ^b 100-lb. bags.

Mineral Production. For 1935, the production of gold (351,347 fine oz.) was valued at \$12,797,145 (at \$35 an oz.); silver (4,605,845 fine oz.), \$3,399,144; copper (14,339,000 lb.), \$1,204,476. The production of lead and zinc exceeded that of 1934. The five metals were produced from 900 lode mines, and from some 850 placer operations. Of the State's 1935 production, the Cripple Creek district produced 128,102 fine oz. of gold; Park County, 73,234 fine oz. of gold; Eagle County more than half the silver and nearly nine-tenths of the copper.

The production of coal for 1935 amounted to 5,872,000 net tons (preliminary) as against 5,210,933 for 1934. Petroleum produced in 1934 totaled 1,162,000 bbl.—some 26 per cent more than in 1933. Petroleum was found in the Hiawatha natural-gas field. The wells of many fields producing natural gas remained closed in 1934, for lack of immediate

means to deliver fuel in competition with coal.

The greatest single mining operation in the State in 1934 was reported to be that of the Climax Molybdenum Company, at Climax, in Lake County. This operation mined during the year 1,275,856 tons of ore, from which were extracted concentrates carrying 8,378,683 lb. of molybdenum and valued at some \$5,800,000. This output comprised some nine-tenths of that of the year for all the Union, which in turn had grown to nearly twenty-five-fold the initial production of 1918.

Education. The State's educational organization prepared a revision of the elementary studies, for issue in 1936. A movement was under way to enact a graduated income tax as a source of State aid to public schools, according to the *Journal* of the National Education Association.

Legislation. A tax of 2 per cent on sales at retail was enacted on February 2, to go into effect on March 1. The act exempted goods such as gasoline and potable liquors, on which the State already levied an excise tax; and tobacco, which paid a Federal tax in excess of 12½ per cent of value. It covered sales of gas and electricity and applied to telephone and telegraphic services, but not to such services as those of physicians and of barbers. It was to be collected by seller from purchaser, in amounts as small as the mill, this necessitated a system of tokens for the collection of small amounts. A separate act directed the segregation of \$1,200,000 a year of the proceeds of this tax to meet the cost of a system of pensions for old people. The chief part of the proceeds was designed to cover the contribution to the relief of the indigent unemployed, required of the State by the FERA as a condition to the receipt of further Federal aid for that group.

Political and Other Events. Governor Johnson called the Legislature in special session in October to consider alleged misconduct in the administration of the law regulating the liquor traffic on the part of the Secretary of State James A. Carr. Carr was found guilty. Near Leadville, a tunnel 20,223 feet long, begun in 1933, to carry water from the upper Roaring Fork River to another watershed, for irrigating farms served by the Twin Lakes Company in Crowley County, 225 miles away, and financed by the RFC, was cut through early in February. Denver made preparations to vote on the local adoption of the Townsend plan of high pensions for the aged, to be provided by a local sales tax; but Mayor Begole canceled the proposed referendum at the request of Dr. Townsend, who declared his plan suited only to nation-wide adoption. See DUST STORMS; FLOODS.

Officers. The chief officers of the State, serving in 1935, were: Governor, Ed C. Johnson; Lieutenant-Governor, Ray H. Talbot; Secretary of State, James A. Carr (removed) and George E. Saunders; Treasurer, Charles M. Armstrong; Attorney-General, Paul P. Prosser; Superintendent of Public Instruction, Inez J. Lewis.

Judiciary. Supreme Court: Judges, Francis E. Bouck, Benjamin C. Hilliard, Haslett P. Burke, E. V. Holland, Charles C. Butler, John Campbell, John C. Young.

COLORADO, UNIVERSITY OF. A coeducational, State institution of higher learning in Boulder, Colo., founded in 1876. The number of students enrolled for the autumn of 1935 was 3352; the summer session enrollment was 3245. There were 325 faculty members, exclusive of assistants. The total income for general maintenance from State

tax, fees, tuition, etc., was \$1,374,756.60. The University received \$315,260 for the maintenance of Colorado General Hospital and \$141,653 for the maintenance of the Colorado Psychopathic Hospital. The library contained 271,681 volumes, 12,000 pamphlets, and 3500 maps. President, George Norlin, Ph.D., LL.D., Litt.D., L.H.D.

COLORADO RIVER. See WATERWORKS; AQUEDUCTS.

COLUMBIA UNIVERSITY. A nonsectarian institution for the higher education of men and women in New York City, founded as King's College in 1754. At Morningside Heights, Broadway and 116th Street, are located: Columbia College (for undergraduate men); Barnard College (for undergraduate women); Teachers College, including New College and the Advanced School of Education; the professional schools of law, engineering, architecture, journalism, business, library service, and optometry; and the nonprofessional graduate faculties of political science, philosophy, and pure science. The College of Physicians and Surgeons and the School of Dental and Oral Surgery are at the Medical Center on West 168th Street, the College of Pharmacy on West 68th Street, Seth Low Junior College in Brooklyn, N. Y., Bard College at Annandale-on-Hudson, N. Y., and the New York Post-Graduate Medical School on East 20th Street. In addition, through university extension classes and the summer session, courses are offered for resident students at Morningside Heights; and other courses are offered at Camp Columbia, as well as at several external centres.

On the basis of the enrollment on Nov. 1, 1935, the total number of resident students for the year was estimated at 30,984, distributed as follows: Undergraduates, 3296, of whom 1762 were in Columbia College, 1023 in Barnard College, 206 in Seth Low Junior College, 133 in Bard College, and 172 in other schools; and graduate students, 2705. The distribution of professional students was as follows: Law, 599; medicine, 422; engineering, 254; architecture, 64; journalism, 71; business, 449; dental and oral surgery, 242; pharmacy, 403; optometry, 94; library service, 400; and Teachers College, 7383; 5093 students were enrolled in university extension classes and 286 were unclassified. Of the 2908 nonresident students, 700 were registered in home study courses and 2208 in special and extramural courses. There were 11,713 students registered for the summer session of 1935. The grand total of resident students is exclusive of 2490 duplicate registrations.

The faculty and officers of administration in 1935-36 numbered 3197, of whom all but 62 were in active service. This number was distributed as follows: Professors, 385; associate professors, 205; assistant professors, 318; associates, 250; instructors, 501; lecturers, 103; assistants, 306; curators, 6; associates, instructors, lecturers, and assistants in Teachers College, 148; instructors and lecturers in the College of Pharmacy, 15; instructors, lecturers, and assistants in Bard College, 20; instructors in extension and home study, not included above, 424; instructors in summer session, not included above, 369; officers of administration, 85; emeritus and retired officers, 62.

The University received from Mrs. T. Coleman du Pont the estate known as "Nevis" at Irvington-on-Hudson, formerly the property of a son of Alexander Hamilton, to enable the University to make new provision for its work in the field of landscape architecture, botany, and gardening. The

School of Journalism was established upon a graduate basis. A celebration was held in honor of the 1000th anniversary of the birth of Firdausi, Persian Epic Poet, on November 8; of the 300th anniversary of the death of Lope De Vega Carpio on April 27; and of the 800th anniversary of Maimonides on March 30. The Columbia University Press brought out the one volume *Columbia Encyclopedia*. Professor Colin G. Fink announced the solution of the problem of coating steel with aluminum. Professor Edwin A. Armstrong announced developments in multiplex signaling and static-less radio. The University's work in the field of Far-Eastern studies was amplified and the Chinese and Japanese Libraries were opened in new quarters on April 12.

During 1934-35 the University received gifts in money representing a total of \$1,766,571. The principal gifts, in addition to \$762,727 from Edward S. Harkness toward the construction and equipment of South Hall, were: \$211,262 from the Estate of John S. Kennedy for the Kennedy Endowment Fund; \$150,000 from the Estate of Joseph R. DeLamar for the DeLamar Fund; \$50,000 from the Estate of Charles T. Mathews, to establish the Mathews Lectureship in the School of Architecture; \$12,220 from the Estate of Nathaniel L. Britton, for the Britton Fund; \$10,000 from Mrs. Charles Pierre, to establish the Pierre Educational Fund; \$165,747 from the Rockefeller Foundation, for various forms of research work; from the Carnegie Corporation, toward the support of the School of Library Service, \$25,000; for the development of the Department of Music, \$5000; for research in various fields, \$37,000; \$32,060 from the Josiah Macy, Jr., Foundation for use in various forms of research work; \$30,000 from Mrs. T. Coleman du Pont to cover the cost, for a period of two years, of the maintenance and upkeep of "Nevis" at Irvington-on-Hudson; from the General Education Board, for the Department of Practice of Medicine, \$15,000; for the sub-department of Tropical Medicine, \$8000; \$26,837 from the Commonwealth Fund for various forms of research work; \$13,500 from the Estate of Seth Low for general purposes; \$10,000 from an anonymous donor for the Institute of Cancer Research; \$10,000 from the W. K. Kellogg Foundation, for special research in the Department of Practice of Medicine. Gifts to income totaled \$553,491.

The capital endowment of the university in 1935, excluding value of plant (including Barnard College, Teachers College, College of Pharmacy, Bard College, and New York Post-Graduate Medical School) was \$84,383,264. The estimated total resources as of June 30, 1935, were \$151,990,386. The annual budget for 1935-36 was \$14,853,385. The library contained 1,476,450 volumes. President, Nicholas Murray Butler, Ph.D., Hon.D., LL.D., Litt.D.

COMMONWEALTH FUND. See INTERNATIONALISM.

COMMUNISM. The Third International. The Seventh Congress of the Third (Communist) International met in Moscow from July 25 to August 20, with 400 delegates from 50 countries in attendance. Because the activities of the Comintern, as the Third International is called, had embarrassed the Soviet Government in the conduct of its foreign relations, no Congress had been held since 1928 (see 1934 YEAR BOOK, p. 158). Repercussions of the 1935 Congress again demonstrated the inconsistency between the Soviet Union's attempts to maintain stable and peaceful relations

with the capitalist countries and its sponsorship of an international organization dedicated to the overthrow of all capitalist countries by revolution. The net effect of the Comintern's meeting was to revive the anti-Communist agitation in non-Communist countries, to imperil the Soviet Government's newly established relations with the United States and other governments, and to obstruct the development of a system of collective security in Europe which the authorities at Moscow were vitally interested in perfecting before the expected outbreak of war with Germany and Japan.

Ruled by the conviction that communism was destined eventually to clash in a world-wide struggle with fascism, the Congress of the Comintern made two important decisions representing sharp departures from its previous strategy. It decided (1) to relax the iron and inflexible control it had hitherto exercised over orthodox Communist parties in the various countries, and (2) to promote the formation of a united front against fascism by all anti-Fascist groups, including the petty bourgeoisie, liberals, Socialists, laborites, and Catholics whom the Communists had previously regarded as sworn enemies. The freeing of local Communist organizations from the rigid bonds of procedure, ideology, and strategy prescribed by the parent organization at Moscow was due to the realization that the effort to employ in other countries the methods which triumphed in Russia had proved a failure. Instead of continuing the attack upon "bourgeois democracy," Communists were ordered to fight "with complete unselfishness" to save it from fascism. This about face was motivated by no tenderness for representative government as such. It was inspired by fear that the triumph of fascism over democratic institutions in other countries would result in the complete suppression of Communist propaganda and political activity. The fate which the powerful German Communist party met at the hands of Hitler was fresh in the minds of the Comintern strategists. In their view, the perpetuation of "bourgeois democracy" was more favorable to the early overthrow of the capitalistic system than the world-wide triumph of fascism.

Reports presented to the Congress by representatives of the Communist branches in various countries aroused much criticism and some alarm in anti-Communist circles. Typical of these reports was the statement by Earl Browder, general secretary of the Communist party in the United States, that the Communist movement was gaining a foothold in many apparently conservative labor and political organizations in that country and was making rapid progress. In provocative terms he outlined his party's plans for attacking capitalism through strikes and disturbances. He admitted, however, that the membership of the American party was only 30,000 and that the Communist-controlled labor unions enrolled but 4000 members. Formal approval of these plans by the Congress led the United States Government on August 25 to protest emphatically against the Soviet Government's alleged violation of its pledge of Nov. 16, 1933. In order to secure recognition by the United States, the Soviet Government had then declared that it would be its fixed policy not to permit on its territory the existence of any organization or group "which has as an aim the overthrow of, or the bringing about by force of a change in, the political or social order of the whole or any part of the United States. . . ." The American note said that failure to prevent further violations of this pledge would entail "most serious

consequences." The British, Italian, Latvian, and Japanese governments likewise protested the activities of the Congress.

The Soviet Government, however, bluntly rejected these protests. It advanced the oft repeated contention that the Third International was an organization having no connection with the Soviet régime and that the authorities at Moscow could not interfere with its activities. The United States did not carry out its threat to sever diplomatic relations, apparently because such a step would have encouraged Japan in its aggressive policy in China (see CHINA, JAPAN, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*). Before disbanding, the Congress selected a new executive committee, including Browder, W. Z. Foster, and Gil Green from the United States. Six new national branches of the Communist party were admitted to membership from the Philippines and various Latin American countries. With these additions, the Comintern comprised Communist parties in 65 countries, with a total membership of 3,148,000.

The meeting of the Congress of the Communist International was followed on Sept. 25–Oct. 12, 1935, by the Sixth World Congress of International Youth in Moscow, at which the American Young Communist League was represented. This organization for Communist youth adopted resolutions and policies identical with those approved by the Congress of the Comintern. Early in October the executive committee of the Communist International attempted to organize a world-wide united front with the Socialists to boycott Italy's invasion of Ethiopia. The Socialist International on October 18 rejected this proposal, primarily because of objections raised by the British and Czechoslovak Socialist organizations. The Socialists received the Communist offer in a friendly manner, however, and the Belgian Socialist leader, Louis de Broekere, offered the collaboration of the Socialist International in separate countries.

Communism in Europe. Perhaps the outstanding development in European communism during 1935 was the trend towards democratization of the Communist dictatorship in the Soviet Union. There were numerous evidences that Stalin and his associates were attempting to broaden the base of their support among the people. Preliminary steps in this direction were taken in previous years, particularly in 1934 when the Soviet authorities reorganized the OGPU and began to emphasize national patriotism in contrast with the previous stress upon internationalism of the Communist type. In February, 1935, the Soviet Constitution was amended along distinctly new lines. The masses generally were given a greater voice in national affairs through the establishment of local and central congresses to be elected by universal, direct, and secret voting. Peasants for the first time were to be given equal suffrage with the industrial workers of the towns. In March these reforms were extended from the political to the economic field when statutes were drafted for the establishment in each village of the collective farms of a general assembly, a majority of which might dismiss officials of the collective or veto their acts. In May Stalin struck a further blow at the rigid dictatorship exercised through the Communist party when he declared that a person could be a good Bolshevik without being a member of the party. He also declared it was time to stress human rights and individual welfare, in contrast with the previous emphasis upon successful completion of the Five-Year Plans and the welfare of society as

a whole. Stalin personally led a movement to stabilize family life and to inject more individual happiness and color into the Russian scene.

Compelling motives for these changes in the Communist attitude and philosophy were the danger of war with Germany or Japan and the necessity of insuring the loyalty of the masses in order to tide over such a crisis; the strife between the Stalin and Trotsky factions of the Russian Communist party, which culminated in the assassination of Sergei Kirov on Dec. 1, 1934; and the virtual completion of the basic programme of industrialization and the collectivization of agriculture, making it possible to relax the iron discipline under which these revolutionary changes were brought about. It remained to be seen, however, whether this apparent trend towards greater democracy was of a permanent or temporary character. (Consult Louis Fischer, "Russia Moves Towards Democracy," *Current History*, September, 1935.)

Meanwhile in the rest of Europe the Communist movement for the formation of anti-Fascist united fronts was making headway wherever fascism was or threatened to be in ascendancy. The Communist-Socialist agreements of 1934 for united action in France and Spain continued in force, and in France it was extended to include the left-wing Radical Socialists. In July the Laval Government's economy decrees, enforcing wage cuts in the naval arsenals and the subsidized French Line, led to violent strikes in Brest and Toulon in which six workers were killed and many injured. The Communists took a prominent part in these events, and many Radical Socialists and Socialists expressed fear that they had abandoned leadership to the Communists by joining in the so-called Popular Front.

In Austria the Social Democrats, driven underground after the civil war of February, 1934, finally concluded a united front agreement with their old enemies, the Communists, in July, 1935. But in Great Britain the powerful Socialist Trade Union Congress voted to exclude Communists from official positions in the unions and the Labor Party rejected the Third International's proposal for a united front boycott of Italy's Ethiopian venture. The British Communist party nevertheless supported the Labor party in the British general election and early in December it applied for affiliation with the Labor party. In the Irish Free State the radical wing of the Republican movement was displaying Marxist tendencies increasingly. The strong Communist movement in Greece was driven underground by the Kondylis dictatorship during 1935, but it again obtained a legal political status following the restoration of George II. Despite repeated ruthless extirpations of Communist conspirators in Bulgaria, the movement continued to gain formidable strength. In general it remained true that in the countries of Scandinavia and western Europe where representative government held sway, the Communist movement represented minorities too small to constitute an immediate threat to existing political institutions.

North America. Immediately following his return from the Seventh Congress of the Third International at Moscow, Earl Browder announced that the Communist Party of America would support the movement for union with the Socialists and Farmer-Labor organizations in establishing a third party for the 1935 elections. He made it clear that the Communists would support a Farmer-Labor party "as a bulwark against reaction, not as an instrument for introducing socialism." The

Communist overtures towards the Socialists widened the breach between the conservative and radical factions of the Socialist party and led to the beginning of an apparently irreparable split (see *SOCIALISM*). The majority faction of the Socialists, under the leadership of Norman Thomas, appeared to be favorable to a united front with communism.

Meanwhile Communist agitators were reported to be active among government relief workers, military and naval forces, sharecroppers of the South, the itinerant fruit pickers of California, and many other working class groups. Their activities were accompanied by an apparently increasing demand on the part of conservative civic and patriotic organizations for legal steps to repress or obstruct Communist agitation. Secretary of the Navy Swanson as well as various army and navy officers appeared before a House Committee at Washington in support of a bill to curb Communist propaganda. A subsequent survey, however, indicated that danger of such propaganda in the Navy was negligible. In response to the Comintern's announced plans for "boring from within" the conservative labor unions, the American Federation of Labor amended its constitution so as to bar Communists from State and central labor bodies, formally aligned itself with the American Legion in the latter's fight against "communism and other subversive influences," and selected Minneapolis as the scene of its first drive to "purge" labor organizations of Communistic influences. The national convention of the American Legion in September again demanded anti-Communist legislation. A bitter attack upon communism as the foe of the Roman Catholic Church was made by Alfred E. Smith, former governor of New York, at the seventh national Eucharistic Congress in Cleveland in September. A host of other groups and organizations joined in the anti-Communist crusade, with the result that bills requiring teachers to swear loyalty to the Constitution were passed in a number of States and more drastic legislation was in prospect.

Several outstanding examples of the mounting anti-Communist hysteria aroused nation-wide comment during the year. California's famous criminal syndicalism law, originally adopted to curb the Industrial Workers of the World, was invoked in January against 17 Communists, who were indicted at Sacramento on charges of attempting to overthrow the government of the United States by force and violence. Rounded up and arrested shortly after the general strike in San Francisco in 1934, they included several leaders of successful strikes among the California fruit pickers in 1933. The four-months' trial ended on April 1, when eight of the defendants were convicted. The State's action in the case, supported by the American Legion, the Associated Farmers, the State Chamber of Commerce and other conservative groups, aroused widespread criticism from liberal spokesmen and the liberal press. In August five alleged Communists were tarred and feathered or beaten by vigilantes near Santa Rosa, Calif.

The flogging to death near Tampa, Fla., on November 30 of Joseph Shoemaker, a labor organizer, aroused even greater discussion. Shoemaker and five companions were arrested in a private home, without a warrant, by a police raiding party for questioning concerning alleged Communistic activities. Released after a short time, Shoemaker and two others were abducted outside of police headquarters by a band of men, who flogged them

severely and then applied tar and feathers. Six Tampa policemen were arrested on December 18 in connection with Shoemaker's death. In Georgia, the State's anti-sedition statute of 1866, under which the Negro Communist, Angelo Herndon, was sentenced to 18 to 20 years in prison in 1934 for organizing a relief appeal by white and Negro families, was declared unconstitutional on Dec. 7, 1935, by Judge Hugh M. Dorsey at Atlanta.

In Canada the march on Ottawa organized during June and July by the unemployed from the western provinces was denounced as "communistic" by Premier Bennett and was broken up by the Royal Canadian Mounted Police, after severe rioting.

Latin America. In Latin America Communist propaganda appeared to be making considerable headway. The Brazilian authorities made sensational charges concerning the abortive revolt of November, 1935, which was said to have been guided and financed by the Soviet Legation at Montevideo, the capital of Uruguay. Some foreign observers reported that the insurrection aimed at liberal and democratic reforms rather than communism and pointed out that Latin American governments customarily labeled all opponents as Communists. However the Brazilian Government, with the support of Congress and the press, adopted drastic measures to root out radicals and alleged Communists, even arresting several noted feminist leaders. A direct result of the Brazilian rising was the Uruguayan Government's action of December 27 in severing diplomatic relations with the Soviet Union and requesting the Soviet Minister and his entourage to leave the country. Brazil had made representations to Montevideo concerning the Soviet Minister's alleged connection with the Brazilian revolt. Argentina and other countries had also protested the dissemination of Communist propaganda from Montevideo.

The death on December 17 of Dictator Gomez of Venezuela was reported to have been followed by the rapid spread of Communistic doctrines. In Chile the Communist party remained a constant threat to the government, and most other governments of Latin America resorted to repressive measures against any one suspected of entertaining Communistic or radical ideas. Costa Rica was one of the few countries where the party remained legal, and there it entered a candidate in the presidential election scheduled for early in 1936. In fact fascism appeared to be making much greater headway than communism throughout Latin America.

The Far East. In China communism made steady headway during 1935, despite the success of the Nationalist Government in driving the Communist armies into the western provinces from their former strongholds in Kiangsi and Fukien. Communistic doctrines were also reported to be gaining many adherents among Chinese students and intellectuals in areas under the Nanking régime's control notwithstanding the cruelly repressive measures enforced to check the movement. The rapid extension of communism was one of the prime factors driving Japan on in her policy of imperialistic expansion in the Far East and her preparations for war with the Soviet Union (see *CHINA, JAPAN, and MONGOLIA under History*). In Japan the police continued their periodical anti-Communist roundups. On November 12 they announced the arrest of 88 youths whom they charged with membership in a secret Communistic society.

For more detailed accounts of Communist activities in the countries mentioned above, see the

article on each country under *History*. Also see *FASCISM*; *SOCIALISM*.

COMORO ISLANDS. See under *MADAGASCAR*.

COMPANY UNIONS. See *TRADE UNIONS*.

CONGO, BELGIAN. A Belgian colony in Central Africa. Area, 920,656 sq. miles; population, 9,467,503 natives and 17,588 Europeans (Jan. 1, 1934). Chief towns: Leopoldville (capital), Matadi, Elisabethville, Jadotville, Stanleyville, and Coquilhatville. In 1933 there were 4107 government and subsidized schools with 208,074 students.

Production and Trade. Palm oil, cotton, rice, coffee, cacao, rubber, copal gum, and sugar were the main agricultural products. Mineral production (1934): copper, 110,000 metric tons; tin, 4500 tons; diamonds, 2,000,000 carats; gold, 11,672 kilograms; cobalt, uranium, radium, and iron were also produced. In 1934, imports were valued at 377,606,441 francs; exports, 843,315,648 francs (5 paper francs were equivalent to 1 belga which averaged \$0.2329 for 1934).

Communications. The river Congo and its tributaries were an important means of transportation. In 1934 there were 2894 miles of railway line and 26,573 miles of highways.

Government. For 1935, revenue was estimated at 529,459,675 francs; expenditure, 681,667,000 francs. On Jan. 1, 1935, the public debt was 3,785,500,383 francs. The colony was administered by a governor-general who represented the King. A colonial council of 15 members was presided over by the Belgian Minister for the Colonies. Governor-General in 1935, Pierre Ryckmans. See *RUANDA-URUNDI*.

CONGO, FRENCH. See *FRENCH EQUATORIAL AFRICA*.

CONGREGATIONAL AND CHRISTIAN CHURCHES. THE GENERAL COUNCIL OF THE. A general council was instituted at Seattle, Wash., June 26, 1931, when the National Council of the Congregational Churches in the United States and the General Convention of the Christian Church merged their activities in this new organization. The formal existence of the former organizations, however, was continued for the time being against possible legal necessities. The general council was to carry on the administrative affairs of the united churches but true to traditions with no ecclesiastical authority, as the plan of union provides for local autonomy in the individual church and in groups of churches associated together. For the early history of these churches consult *THE INTERNATIONAL ENCYCLOPEDIA*, vol. v, pp. 285 and 737 ff. and *THE NEW INTERNATIONAL YEAR BOOK* for 1932.

In November of 1935 a plebiscite of the constituency was taken to determine the mind of those participating on the question of war. About 200,000 participated in the plebiscite. It showed 6 per cent prepared to respond to any call of the country to arms; 42 per cent willing to support the government in a war declared after exhausting the possibility of peace; 33 per cent ready to fight in case of invasion of the country, and 15 per cent determined to refuse cooperation in the event of any war.

The officers for the biennium ending in June, 1936, are: Honorary Moderator, Dr. S. Parkes Cadman, Brooklyn, N. Y.; moderator, the Rev. Jay T. Stocking, St. Louis, Mo.; assistant moderator, the Rev. Stanley C. Harrell, Durham, N. C.; secretary, the Rev. Charles E. Burton, New York City; associate secretary, the Rev. Frederick L.

Fagley, New York City; assistant secretary, the Rev. Warren H. Denison, Dayton, Ohio; and treasurer, William T. Boulton, New York City.

Statistics for the Congregational and Christian churches as of Jan. 1, 1935, showed 6282 churches, 6059 ministers, and a church membership of 1,029,002. There were 3414 young people's societies, with a membership of 189,330. The Sunday school enrollment was 734,146. The total raised for all benevolences was \$2,035,923, and the home expenses of the churches were \$13,305,260.

The American Board of Commissioners for Foreign Missions is the oldest foreign missionary society in the United States, having been organized June 29, 1810. On Jan. 1, 1935, there were 14 missions under 8 different flags; the stations connected with these missions numbered 88 and the outstations 2096. The missionaries holding life appointments numbered 508 and included 115 ordained men, 61 unordained men, 171 wives, and 161 single women. There were also 30 associates serving for shorter periods, bringing the total number of missionaries up to 538, while native workers numbered 7040. Religious services were conducted in 2588 places. The organized churches numbered 780, with 103,283 communicants. The total church constituency numbered 388,971; Sunday schools, 1237; theological seminaries and training schools, 30, with an attendance of 1549 students; colleges, 9, with 3846 students; secondary schools, 52, and primary and elementary schools, 970, with a total enrollment of 62,953. There were 28 hospitals and 44 dispensaries, with a staff of 40 physicians and 27 foreign nurses.

A wide range of home missionary activities is carried on by the Church Extension Boards, including the Congregational Home Missionary Society, the Congregational Church Building Society, and the Congregational Sunday School Extension Society. They organize churches, establish church schools, aid needy congregations in the support of their ministers, give specialized service to foreign-speaking groups and to Negroes in the North, and assist in church and parsonage building. In 1934 these societies helped to maintain 605 churches and preaching stations, having a total membership of 32,181, and received 2437 persons into church membership. There were enrolled 434 workers, including students employed for short-term summer service. Expenditures for church and parsonage aid amounted to \$217,829; total expenditures, including payments from revolving funds, amounted to \$575,024.

Among the theological seminaries with which the Congregational and Christian denominations are affiliated are the Chicago Theological Seminary, Divinity School of Yale University, Hartford Theological Seminary, Oberlin Graduate School of Theology, Atlanta Theological Seminary Foundation (Nashville, Tenn.), Union Theological College (Chicago), and the Pacific School of Religion (Berkeley, Calif.). In addition there are 43 colleges which have had some historical relation to the Congregational and Christian Churches, although a number of them are now undenominational.

The headquarters of the General Council of the Congregational and Christian Churches are at 287 Fourth Avenue, New York City, with a regional office in the Christian Publishing Association Building in Dayton, Ohio. The Congregational Publishing Society, which issues *The Advance*, maintains branches at 14 Beacon St., Boston, and at 19 South La Salle St., Chicago.

CONNECTICUT. Population. On Apr. 1, 1930 (Fifteenth Census), 1,606,903; July 1, 1934, by latest Federal estimate, 1,655,000; 1920 (Census), 1,380,631. Hartford, the capital, had (1930) 164,072 inhabitants; New Haven, 162,655.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

<i>Crop</i>	<i>Year</i>	<i>Acreage</i>	<i>Prod. Bu</i>	<i>Value</i>
Hay (tame)	1935	251,000	353,000 *	\$5,719,000
	1934	250,000	336,000 *	6,250,000
Tobacco	1935	12,100	16,905,000 *	5,577,000
	1934	10,200	14,758,000 *	5,281,000
Corn	1935	54,000	2,160,000	1,728,000
	1934	52,000	2,132,000	1,961,000
Potatoes	1935	15,000	1,980,000	1,485,000
	1934	15,000	2,625,000	1,575,000
Apples	1935	.....	805,000	845,000
	1934	.....	356,000	538,000

* Tons. * Pounds

Education. The number of the inhabitants of school age was reckoned, for the year ended June 30, 1935, as 350,719; the included ages were those from 4 to 16 years. The enrollments of pupils in the public schools numbered 321,831. Of these, 16,556 were in kindergartens; 207,010, in elementary schools; 24,356, in junior high schools; 73,909, in other high schools. The expenditures of the year for public-school education throughout the State totaled \$29,880,308. The yearly salaries of teachers averaged \$1429 in kindergartens, \$1392 in elementary positions, \$1696 in junior high schools, and \$1898 in the other high schools.

Charities and Corrections. As required by State laws of 1935, the office of Commissioner of Welfare was created to take the place of the previous Department of Public Welfare and Department of State Agencies and Institutions. A Public Welfare Council was made the advisory collaborator of the new Commissioner (C. F. Walcott). Under him were organized divisions to attend to the State's new system of old-age assistance, aid to widows, State aid to paupers, institutional collections, adult welfare, child welfare, and research and statistics.

The State owned and operated the following institutions for the care and custody of persons. Connecticut State Prison, at Wethersfield, and Osborn Prison Farm, at Enfield, with a population of 749 for both; Connecticut State Farm for Women (offenders), Niantic, 293 inmates; Connecticut School for Boys (delinquent), Meriden, 325; Long Lane Farm (delinquent girls), Middletown, 214; Connecticut Reformatory (young men, to 25 years), Cheshire, 308; for the mentally disordered, State Hospitals at Middletown (3156 inmates), Norwich (2906), and Newtown (483); for epileptics and the feeble-minded, Mansfield State Training School and Hospital, at Mansfield, 1164; Mystic Oral School, Mystic, 105; Fitch's Home for Soldiers and Sailors, Noroton Heights and Rocky Hill, 584; five Tuberculosis Sanatoria, 1334.

Legislation. The Legislature enacted a system of pensions for needy old people, designed to bring the State into conformity with Federal provision for aid toward such pensions. The State's law for the regulation of the liquor traffic was revised to permit the serving of liquor by the drink in hotels, restaurants and clubs; these places, however, did not gain permission to sell over the bar; whether they might serve liquor on Sundays was made subject to local option. The existing system of licensed taverns with bars for the sale of beer but not of liquors was retained. Cigarettes were sub-

jected to a State tax of 2 cents on each package of twenty.

Fairfield County was authorized to issue \$15,000,000 of bonds with which to obtain money from the Reconstruction Finance Corporation for the early completion of its projected Merritt Parkway; the authorizing act required that the road run from the boundary of New York State to the Housatonic River, that it be restricted to non-commercial vehicles, and that it be not routed straight, but laid out with regard to landscape. The Legislature rejected certain laborite measures, such as a provision for "prevailing rate of wages," to be fixed by a State board, on State and local road work, and a limitation of women's work in factories to 48 hours a week. It also rejected a bill to qualify the State for the application of Federal rural rehabilitation. The administration of *Charities and Corrections* (q.v.) was put in the hands of a single Commissioner of Welfare aided by an advisory board.

Political and Other Events. The tercentenary of the white man's first settlement of Connecticut was marked by observances in the chief parts of the State, spread through much of the year. A composite photograph of the entire surface of the State, taken by airplanes, was put together in the form of a map and displayed at a tercentenary industrial exposition at Hartford. The economic conditions improved during the year, although the State was not the scene of any particularly great direct Federal scheme of expenditure. The number of "families" dependent on public relief for the unemployed declined but was still 36,780 (comprising about one-tenth of the population) in June. The State had carried nearly half the cost of such succor in 1934, the Federal Government paying 51.3 per cent. This policy was continued; it did not necessitate measures of State legislation, for local funds made up more than four-fifths of the State's share.

Elections held on October 7 for filling local offices indicated a moderate trend toward the Republican party. Torrington, Danbury, and Stonington went Republican, but Wallingford went Democratic.

Officers. The chief officers of the State, serving in 1935, were: Governor, Wilbur L. Cross; Lieutenant-Governor, T. Frank Hayes; Secretary of State, C. John Satti; Treasurer, John S. Addis, Comptroller, Charles C. Swartz; Attorney-General, Edward J. Daly.

Judiciary. Supreme Court of Errors: Chief Justice, W. M. Maltbie; Associate Justices, F. D. Haines, G. E. Hinman, John W. Banks, Christopher L. Avery.

CONNECTICUT COLLEGE. A liberal college of arts and sciences for the higher education of women in New London, Conn., chartered in 1911 by the State of Connecticut. The enrollment for the autumn of 1935 was 650. The faculty numbered 71 members. The productive funds amounted to \$1,460,205, and the budget for the year, not including building operations, was \$604,137. There were 65,000 volumes in the library. In 1934-35 the college received approximately \$18,000 in miscellaneous gifts. A new greenhouse and plant hormone laboratory for teaching and research, built from a Rockefeller Foundation grant and additional gifts, was opened for use in September, 1935. President, Katharine Blunt, Ph.D.

CONSERVATION. See FORESTRY.

CONSTITUTIONAL LAW. See LAW.

CONTRACT BRIDGE. Oswald Jacoby was the outstanding American contract bridge player in 1935, a year in which the game reverted more to the status of a game than to a highly publicized sport wherein ballyhoo played such an important part.

Jacoby, probably the most dynamic of the well-known players, was winner of the open pairs championship at Chicago, winner of the individual masters' trophy, member of the winning team in the Vanderbilt Cup competition as well as one of the invincible Four Aces who capped the year by defeating a picked French team in New York in December. These achievements netted Jacoby 109 masters' points in the accumulative tally kept by the American Bridge League. On that basis, B. Jay Becker was second for 1935, with Theodore A. Lightner third. The next few in line were Edward Hymes, jr., Louis H. Watson, Waldemar von Zedtwitz, Louis J. Haddad, and Charles Hall.

The lone carnivals of the year were the United States-France match and the set match between Mr. and Mrs. Hal Sims and Mr. and Mrs. Ely Culbertson. In the latter the Culbertsons downed the Sims pair. In the former, the first few days all the play, with the exception of the final six hands of the match, was done in a quiet hotel room. But the final night's play was staged in Madison Square Garden with life size cards, carried by walking ushers, illustrating the play taking place in an inside room. The public address system was used to show the play and to direct the living cards. There was small attendance and the failure of the effort to bring bridge into the "games to be watched" category showed conclusively that the game is to be played rather than seen. The winning United States team was made up of Jacoby, David Burnstine, Michael Gottlieb, and Howard Schenken, and the French team presented Emmanuel Tulu-maris, Baron Robert de Nexon, Sophie Venizelos, Georges Rousset, and Pierre Albarran. The United States margin at the finish was 2810 points.

CONTRACTS. See LAW.

COONTZ, ADM. ROBERT EDWARD, U.S.N., RET. An American naval officer, died at Bremerton, Wash., Jan. 26, 1935. Born at Hannibal, Mo., June 11, 1864, he was educated at Ingleside College, Palmyra, Mo., from 1878 to 1879, and at Hannibal College from 1879-80. He then entered the U.S. Naval Academy at Annapolis, graduating in 1885. He was commissioned an ensign on July 1, 1887, and first detailed for duty on the *Mohican* and sent to Panama. The intense heat there disagreed with him and he was transferred to Sitka, Alaska, where he remained for six years. As a result of his experiences there, his knowledge of Alaskan waters was so detailed, that he qualified as a pilot. When the United States fleet went around the world in 1908, he served as executive officer on the *Nebraska*, and in 1910 was appointed Commandant of the midshipmen at Annapolis, serving until 1911.

He was made Governor of Guam in 1912, and upon his arrival introduced himself as a "hanging governor" believing that only by strong measures would he be able to stop the "crime wave." At the expiration of his year's term of office, the crime wave had ceased, and he was transferred to sea duty. He was made commanding officer of the *Georgia*, which won the fleet gunnery trophy in the manoeuvres of 1913. In July, 1915, he was appointed commandant of the Puget Sound Navy Yard, and served there until he was ordered to command the 7th Division, U.S. Atlantic Fleet in August, 1918. Also, he was then assistant for Naval

Operations and had reached the grade of Rear Admiral.

Admiral Coontz' appointment by Secretary of the Navy Daniels as Chief of Naval Operations, with the rank of full admiral, was confirmed by the Senate, Oct. 24, 1919. He held this post until July 21, 1923, and while head of this department worked for the strengthening of his office and for the adoption of a definitive naval policy, being a firm advocate of a big navy. After the Limitation of Arms Conference at Washington in 1921-22, he fought for the prevention of the reduction of the enlisted personnel of the United States Navy to 86,000, and considered his victory one of the accomplishments of his régime.

On Aug. 4, 1923, he succeeded Adm. Hilary P. Jones as commander-in-chief of the United States fleet which was then the largest concentration of naval power ever assembled under the American flag. He commanded it on its Hawaiian-Australian-New Zealand cruise and presented an extensive report criticizing certain deficiencies in the navy and holding that a uniform speed for ships was necessary. A general inquiry conceded the correctness of his observations. On Aug. 3, 1925, he was relieved of his duties as commander of the fleet, and on November 30 was assigned to the 5th Naval District at Hampton Roads, Va., as commandant. He retired in 1928 with the rank of rear admiral, and in 1930 was advanced on the retired list to the rank of admiral. In this same year, testifying before the Senate Committee on Naval Affairs, he reiterated his belief in the efficacy of a strong navy.

For his services to his country during his naval career, Admiral Coontz was awarded the Spanish-American War Medal, the Philippine Insurrection Medal, the Vera Cruz Medal, and the Distinguished Service Medal. On Oct. 15, 1923, he was awarded the Distinguished Service Medal of the American Legion. He was commander-general of the Military Order of Foreign Wars from 1920 to 1923, and commander-in-chief of the Spanish-American War veterans from 1932 to 1933. His biography, *From the Mississippi to the Sea*, appeared in 1930.

COÖPERATION. Since there is no routine system of reporting data on the cooperative movement in the United States, reports of activities reach journals and other private sources at irregular intervals. Five aspects of the American cooperative activities will be reported in this article: Productive enterprises, coöperative wholesale enterprises, cooperative housing enterprises, cooperative credit associations, and consumer coöperatives.

Productive Enterprises. In spite of the fact that it would be logical for workers' productive enterprises to decrease in number during the depression, there was a net loss of only two societies between 1929 and the end of 1933. At that time there were 18 such organizations in active operation. A detailed survey of eight of these, made by the Bureau of Labor Statistics, clearly shows the nature of these enterprises. These eight organizations had 1181 shareholders, of whom 47 were employed in the coöperative enterprises, and 650 non-shareholder employees. During the year they paid wages to a total of \$772,073. With a share capital of \$1,234,704 and reserves of a trifle over one half a million dollars, they did a business of \$3,629,470, an average of \$483,684 per society. As a group, they lost money to a total of \$86,938. However, comparison with earlier years shows a gain in the average number employed, in average share capital

and in average amount of sales, and, while not yet profitable in all instances, the enterprises showed average sales in 1933 above the 1929 level. The enterprises have been severely handicapped by lack of business experience, of knowledge of salesmanship and of market conditions, as well as lack of adequate working capital.

The producing coöperative differs from a consumers society in that it is not desirable to increase the number of members constantly. On the other hand, the necessity is to increase the volume of business, thus decreasing the overhead expenses and increasing the benefits accruing to each member. New members are, therefore, likely to be looked upon as reducing the profits of others, especially if the society achieves business success. Moreover, in proportion as the operations require high technical skill, the field for new members is restricted, especially if it is the rule that all members be experts in the manufacturing processes. This applies, for instance, in the manufacture of shoes, handmade window glass, and in the production of ply board. For this reason, the B.L.S. study suggests that some of the coöperative companies are in reality more of the nature of trade unions or even joint stock enterprises than of coöperative work shops.

A summary statement of the kinds of production enterprises operating cooperatively is as follows: Factories for the production of boxes, cigars, clothing, food products, ply wood, shoes, and shingles. In addition, one coöperative coal mine was reported, an enameling plant, and two laundries. Of the 18 societies reporting, the average period for which they had been in existence was 19 years and 3 months, the range being from 13 years to 37 years. As to the number of shareholders, the largest society reported had 565, with an employment roll of 205 plus 231 non-shareholder employees, while the smallest society reported had 8 shareholders, all of whom were employed in the business, as well as 33 non-shareholding employees. It is to be especially noticed that 5 of the 8 societies studied employed more non-shareholders than members.

The average annual earnings were very low, ranging from \$366 to \$927, the general average being but \$704. However, there is no means of telling how far these figures are distorted by the evidence of seasonal employment; and certainly they do not indicate whether or not the workers operated their coöperative enterprises part time and derived a portion of their yearly income otherwise. The work-week ranged from 36 hours to 44. In the case of the shoe factory alone did the business done in the year 1933 top \$1,000,000, and in that instance it was \$1,622,616. On the other hand, the smallest annual business was done by coöperative cigar factories, the two taken together doing a total business of but \$18,798.

The financial control of these coöperative societies lies with the general meeting of the stockholders, usually one vote being allowed to each member. The actual conduct of affairs is in the hands of a board of directors, though frequently the task is delegated to an elected manager, the directors exercising general oversight. The books of the societies are subjected to regular audits, usually by a professional accountant.

Coöperative Wholesale Societies. Turning to coöperative wholesale organizations the reports for the year 1934 show that sales rose 50 per cent over the preceding year and all organizations reporting to the Federal Bureau of Labor Statistics showed profits. As a rule coöperative wholesale

societies are owned and controlled by local retail consumers societies which provide the necessary capital. This phase of the coöperative movement has developed slowly in the United States, the most recent disaster which inhibited invasion of the field occurring in the year 1920-21 as a consequence of an attempt to establish the business on a national scale. This led to the development of the regional approach, since four regional wholesale organizations were able to survive the 1920-21 depression. There are now two regional wholesale societies on the Pacific Coast, one in the South, eight in the Middle West and one in the East. In 1933 an organization called National Cooperatives Incorporated was formed to act as the national wholesale agent for a group of regional wholesale societies, especially in the purchase of petroleum products, tires, batteries, and so on. The nine regional wholesale societies reporting to the B.L.S. stated that at the end of 1934, they had 1334 local members and that they were acting for 349 societies which had not become members although using the wholesale facilities.

The nine regional societies had a paid-in share capital of \$1,368,214, reserves of \$140,695, and total assets of \$2,713,110. The nine societies did a combined business for 1934 amounting to \$15,549,316, the total net trading gain being in excess of \$300,000. They paid out interest to member societies to a total of \$24,967 and also paid out \$120,884 in patronage rebates. Five societies reporting were grouped together for study and it was determined that operating expenses were 9.45 per cent of their sales in 1934, the largest single item being wages—5.1 per cent. Wages paid out total nearly \$600,000 and were disbursed to 375 workers, who labored an average of 41 hours per week.

The coöperative wholesalers handled the following products in considerable volume: petroleum products, automobile tires, tubes, and batteries, flour and feed, salt, twine, paint and varnish, coal, groceries, clothing, bakery products, light hardware, and building materials. It is interesting to note that two of the societies reporting were engaged in the manufacture of lubricating oil, one in the manufacture of feed and one bakery goods.

Coöperative Housing Societies. Turning now to coöperative housing societies, the reports of whose activities as of 1933 became available during the current year, it appears that the median monthly rental for the apartments was between \$40 and \$45 per month, as a rule for a four-room apartment. The members had an investment in the enterprise amounting from \$500 to \$1000 per room. Of the 21 societies furnishing data to the B.L.S., 13 were in Brooklyn and eight were in Manhattan and the Bronx. The oldest was organized in 1916, and the average of all societies reporting was 11½ years. While there were 626 member shareholders, only 484 were occupying apartments in the building, while 203 apartments were rented to non-members. The paid-in share capital amounted to a little over \$900,000 and the present value (end of 1933) of the coöperatively owned building was \$2,629,663. The societies had experienced a decline in the net worth of the building similar to that of other real estate holders.

A word may be said as to the usual method of operating these enterprises. A member is usually required to make a down payment, the balance being paid in monthly amounts as rental and enough to cover interest, a share in the cost of building maintenance, and an instalment on principal. The cost of interior upkeep of the apartments

is generally borne by the members occupying them. Two of the societies reported the initial payment per room was less than \$100, and this ran up in one instance to a down-payment of \$2000 for the apartment. The total cost per apartment was less than \$1000 in one society and ran up to \$8300 in another in calculating the number of rooms. The bathroom was not counted but the kitchen was considered a room, and the dining alcove one-half a room. As a rule, the coöperative apartments have from 3 to 4 rooms.

The City of Washington has two coöperative residential hotels. Each member is required to purchase five shares of preferred stock and one share of common stock, only the latter of which carries the voting privilege. The cost to the member is ranged from \$200 to \$500 per room, of which \$50 must be paid down. Monthly basic rents range from \$25 to \$35. The hotel reporting details has 250 tenants, of whom 100 are stockholders, and 114 stockholders not residing in the hotel. The hotel is managed by a board of directors elected by the members. It operates a cafeteria and provides a laundry room for the use of the guests, maintains an elaborate parlor and ballroom. It is chiefly patronized by young women employed in the House and Senate office buildings.

Credit Societies. The B.L.S. reports that, while unable to make a general survey of all credit societies for 1934, the number continued to increase and the membership of the individual units as well. The survey obtained data from cooperative credit societies in 24 States. Membership data reported for 20 States showed a total membership of 425,000 persons at the end of 1934. The concentration was in Massachusetts, always preeminent among credit union States with 109,434 members, or nearly twice the membership of that of its nearest competitor, Illinois. Massachusetts also was the leader in point of capital, resources and loans. The 24 States reported combined share capital in excess of \$26,250,000 and total assets of above \$40,000,000. Reports covering 1513 societies show that they had served 195,124 borrowers and it is calculated that the total loans of all societies during 1934 was probably about \$40,000,000. As a rule credit unions are cooperative societies making loans to their members only and are designed to furnish a source of credit for small borrowers who lack banking connections. There is usually a top limit of \$50 per loan. It is noticeable that this cooperative development is concentrated in four States—Massachusetts, Illinois, New York, and Wisconsin—which together have 46 per cent of the total number of societies, 60 per cent of the membership, and 61 per cent of the total resources.

Consumers Coöperatives. A report of the Cooperative League of the U.S.A., made in June of 1935, takes satisfaction in the fact that retail authorities addressing the Boston Conference on Distribution predicted a rapid rise of coöperative consumer societies and also in the equally significant development, the benevolent interest of various departments of the Federal government concerned with improving the living conditions of depressed groups. The report stated that membership in consumer coöperatives had increased 40 per cent from 1929 through 1934 and was still rising, the total membership now being in excess of one million and three quarters. It was pointed out that while some personnel was being taken over from the traditional retail organizations, there was a definite tendency to develop new personnel, the Wisconsin organizations having their own training school.

In this connection it is interesting to note that the Wisconsin legislature in 1935 passed a statute requiring the giving of courses in consumer coöperation throughout the public school system from the State University downward. Hereafter no certificates are to be granted for the teaching of courses in economics, social studies and agriculture unless the applicant's course of training has included the subject. The Cooperative League predicts that expansion into the production field is imminent. See AGRICULTURAL EXPERIMENT STATIONS.

COPPER. The smelter production of copper from domestic ores in 1935 was 373,000 short tons and the refinery production of new copper from domestic and foreign sources was 592,500 tons, according to an advance summary issued by the U.S. Bureau of Mines. In order to show mine production by States, figures of the recoverable copper in the mine output of the country have been compiled, as shown in the accompanying table which represents estimated recoverable metal output of the mines and should not be confused with figures of smelter and refinery production.

	1934	1935
Eastern States	10,167	10,025
Central States		
Michigan	do	24,108
Missouri	do	23
Western States:		
Arizona	89,041	135,250
California	285	1,280
Colorado	5,647	7,170
Idaho	766	1,050
Montana	31,633	77,945
Nevada	20,806	35,010
New Mexico	11,815	2,530
Oregon	19	200
Texas	15	17
Utah	43,012	64,210
Washington	7	50
Wyoming	2	1
Alaska	61	3,800
Total	237,407	369,520

The output of recoverable copper by mines in the United States in 1935 amounted to about 369,520 tons, an increase of 56 per cent over the production of 237,407 tons in 1934. The marked increase is accounted for principally by the large gains in production in Arizona, Montana, Utah, and Nevada. All copper-producing States, except New Mexico, had larger outputs in 1935 than in 1934. The decrease in New Mexico was due to the idleness of the Chino mine group, which in 1934 accounted for 82.40 per cent of the total for the State. Activity at copper mines as a whole in 1935 was still low in comparison with years prior to 1932 and amounted to only 42 per cent of the annual average for 1925-29.

The average quoted price for copper for the first five months of 1935 was 9 cents a pound for Blue Eagle copper delivered at Connecticut destinations. Late in June the price dropped to 8 cents a pound, where it remained until August, when it began to rise. The average monthly price for November and December was 9.25 cents a pound, the highest quotation for the year. The monthly prices for copper in 1935 indicate an average for the year of 8.88 cents, an advance of 0.22 cent over 1934.

World production of copper, as estimated by *Engineering and Mining Journal*, New York, was about 200,000 tons greater than in 1934. The estimate for 1935 was 1,585,600 short tons; the production in 1934 was 1,381,929 short tons. In 1932, world production was 1,028,491 short tons, of which but 272,005 tons were produced in the

United States. The world annual average over the five-year period 1925-29 was 1,806,686 short tons, of which 892,730 tons, or 49 per cent came from United States mines. In 1935 African production was estimated at 288,000 tons (292,525 tons in 1934); the Chilean estimate was 285,000 tons (282,303 tons in 1934). Canadian production in 1935, as reported by the Dominion Bureau of Statistics, totaled 209,377 tons as compared with 182,380 tons in 1934.

COPYRIGHT. Registrations for the fiscal year, 1934-35, according to the report of the United States Register of Copyrights, numbered 142,031, as compared with 139,047 for the preceding year. Of these, 51,009 were classed as books, but included pamphlets, leaflets, and contributions to periodicals, those printed in the United States numbered 46,488, those printed abroad in a foreign language, 3283, while the remainder, 1238, were English books registered for *ad interim* copyright. The chief classes of the remaining registration, in order of numerical importance, were: Periodicals, 36,351 numbers; musical compositions, 27,459; dramatic or dramatico-musical compositions, 6501; works of art, including models or designs, 3082; prints and pictorial illustrations, 3120; drawings or plastic works of a scientific or technical character, 2331; photographs, 1973; maps, 1343; motion-picture photographs, 857. The renewals numbered 6661, as compared with 6989 in the preceding year. The fees applied during the year amounted to \$259,881.70. The total number of articles deposited during the fiscal year ended June 30, 1935, was 226,202.

The total receipts of the Register's office for the fiscal year were \$259,881.70, the total expenditures for salaries, \$234,653.47, and for supplies, \$1,372.97.

CORINTH. See *ARCHAEOLOGY*.

CORN. Data on the corn production of the different countries of the world in 1935 were still incomplete at the close of the calendar year. The estimated yields of 13 countries reporting to the International Institute of Agriculture amounted to 2,734,672,000 bu. compared with 2,063,724,000 bu. in 1934 and 3,116,272,000 bu., the average annual yield for the five years 1929-33. The production of these countries in 1935 was 32.5 per cent above the production in 1934 but 12.2 per cent below the average for the five-year period. The acreage of the countries reporting, 123,753,000 acres, was 5.4 per cent above the acreage of 1934 but 6.1 per cent below the average for the five years mentioned. The 1935 production of the leading countries of this group exclusive of the United States was reported as follows: Rumania 188,969,000 bu., Italy 90,749,000 bu., Hungary 56,563,000 bu., and Bulgaria 39,722,000 bu. According to the latest reports available the Soviet Republics in 1933 produced about 189,000,000 bu. on 9,777,000 acres. The Argentine crop harvested in April and May, 1935, was reported as 450,769,000 bu.

The 1935 corn production of the United States was estimated by the Department of Agriculture at 2,202,852,000 bu., larger by 60 per cent than the short crop of 1,377,126,000 bu. in 1934 but still 14 per cent smaller than the average of 2,562,147,000 bu. for the five years 1928-32. These estimates included the production of grain and the acreage harvested for silage, fed green or as fodder and used for hogging down or grazing expressed in terms of bushels of grain. The 1935 acreage of corn for all purposes was increased about 5.6 per cent over that of 1934 and was estimated at 92,727,000 acres compared with 87,795,000 acres in 1934 and 102,768,000 acres, the average for the five-year period. The

yield per acre of the total corn area harvested in 1935 was 23.8 bu. per acre compared with 15.7 bu. in 1934, when excessive and wide-spread drought prevailed, and 25.7 bu., the average for the 10 years 1923-32. Drought conditions and fall frosts reduced yields in most of the important corn producing States west of the Mississippi River and frosts in the northern part of the corn growing region coupled with wet weather interfered with proper ripening, lowered quality, and delayed husking. Preliminary estimates for the 1935 crop marketing season placed the average farm price per bushel at 57.7 cents while the average price received by farmers during the crop marketing season of 1934 was 81.6 cents. On this basis the total values of the crops were \$1,271,089,000 and \$1,124,321,000 respectively.

The 1935 production of the principal corn growing States on a grain yield basis was reported as follows: Iowa 352,425,000 bu., Illinois 288,382,000 bu., Indiana 153,444,000 bu., Minnesota 148,431,000 bu., Ohio 133,980,000 bu., Nebraska 105,570,000 bu., and Texas 105,358,000 bu. These States also ranked first in the production of grain but not in the same order, Minnesota changing places with Ohio and Nebraska with Texas. The total corn silage production in 1935 was estimated at 33,370,000 tons, or 96,000 tons less than the production in 1934. The leading States and the tonnage produced were given as follows: Wisconsin 8,555,000 tons, New York 3,924,000 tons, Iowa 3,164,000 tons, Minnesota 3,138,000 tons, Pennsylvania 2,176,000 tons, and Illinois 1,936,000 tons.

During the fiscal year ended June 30, 1935, the United States exported 1,856,000 bu. of corn, 117,000 bbl. of corn meal, 1,813,000 lb. of corn breakfast foods, 10,334,000 lb. of hominy and corn grits, 880,000 lb. of corn oil, 27,899,000 lb. of corn sirup, 4,411,000 lb. of corn sugar, and 39,932,000 lb. of corn starch and corn flour. During the fiscal year 6,510,000 bu. of corn were imported compared with 125,000 bu. for the preceding fiscal period.

In cooperation with the United States Department of Agriculture the Iowa Agricultural Experiment Station has developed and distributed to seed growers four corn hybrids which appear especially adapted to different parts of the State. The Minnesota Agricultural Experiment Station has originated a new variety named Minhybrid which withstands lodging, ripens uniformly, and is giving high yields in southern Minnesota. The results of experiment station work in the northern States indicate that the use of phosphatic fertilizers tends to advance materially the maturity of corn. Several experiment stations cooperating with the Department of Agriculture are working on means of controlling the European corn borer without adding materially to the cost of growing the crop. Illinois, Kansas, Missouri, Nebraska and other mid-western States are enforcing corn borer regulations to prevent the introduction of this insect pest.

CORNELL UNIVERSITY. A nonsectarian institution for the higher education of men and women in Ithaca, N. Y., founded in 1865. There were 5768 students enrolled in the autumn session of 1935, distributed as follows: Graduate school, 654; law school, 200; medical college, the main division of which is in New York City, 286; arts and sciences, 1774; architecture, landscape architecture, and fine arts, 147; engineering, 789; veterinary medicine, 129; agriculture, 1218; and home economics, 626, including 198 in hotel administration. Of these students 1304 were women. The 1935 summer session registration was 1652.

The faculty, composed of 1333 members, had 35 professors emeritus; 297 professors, 226 assistant professors, 14 lecturers and associates, 373 instructors, and 388 assistants. The Messenger lectures on the evolution of civilization were given by Prof. Wesley C. Mitchell of Columbia University.

The productive funds on June 30, 1935, amounted to \$29,882,275. The income applicable to current expenses was approximately \$7,500,000, including \$2,479,940 of State, and \$447,553 of Federal appropriations. Gifts amounting to \$761,585 were received during the fiscal year. The land and buildings were valued at \$18,696,814, and the equipment at \$6,492,029. The library contained 935,000 volumes. President, Livingston Ferrand, M.D., LL.D.

CORPORATIONS. See **LAW**.

CORPORATIVE STATE. See **AUSTRIA**, **ITALY**, and **PORTUGAL** under **History**.

CORSICA. An island department of France in the Mediterranean, 100 miles southeast of Nice. Area, 3367 sq. miles; population (1931), 297,235. Ajaccio, the chief city, had 23,917 inhabitants. Ajaccio, Porto Vecchio, and Bonifacio are among the naval stations of France.

CORTIN. See **BIOLOGICAL CHEMISTRY**.

COSMIC RAY. See **PHYSICS**.

COSTA RICA, kōs'tā rē'ka. A Central American republic. Capital, San José.

Area and Population. With an area of about 23,000 square miles, Costa Rica had an estimated population of 565,427 on Jan. 1, 1935 (471,525 at the 1927 census). The population of the central plateau, where are found the capital and most of the other cities, is largely of Spanish and European descent. There are some 18,000 Negroes from the British West Indies in the Atlantic banana zone and about 3000 Indian aborigines. Living births in 1934 numbered 23,858; deaths, 10,020; marriages, 3513. The chief towns, with their 1934 populations, were: San José, 68,724 (with suburbs), Cartago, 17,890; Limón, 16,203; Heredia, 14,318 (with suburbs); Alajuela, 9782; Liberia, 8875; Puntarenas, 8127. In 1933 there were 579 primary schools, with 53,700 pupils; two secondary and one normal school, with 1618 students; and two colleges (at Cartago and Alajuela). Fifty-three additional school houses were under construction in 1934.

Production. Agriculture and cattle raising are the chief occupations, but there is considerable lumbering and mining. The principal export products in order of their importance are coffee, bananas, cacao, hardwoods, gold, and hides. Coffee exports in 1933-34 totaled 271,747 bags (of 112 lbs.), against about 367,945 bags in the year ended Sept. 15, 1935. Corn, sugar cane, rice, potatoes, and tobacco are other crops. Cattle in the country in 1935 numbered 365,589. Considerable gold and silver is mined. There were 6532 industrial establishments in 1929, the manufacture of shoes, soap, and candles being the chief lines.

Foreign Trade. Imports in 1934 were valued at 37,061,624 colones (28,874,978 in 1933) and exports at 36,958,640 colones (48,571,775 in 1933). In contrast with the normal favorable balance of trade (amounting to 19,696,797 colones in 1933), the 1934 imports exceeded exports by 102,984 colones. The value of the chief exports in 1933 was: Coffee, 36,271,432 colones; bananas, 9,016,104 colones; and cacao, 1,966,148 colones. Trade is chiefly with the United States, Great Britain, and Germany. In 1934 exports to the United States were valued at \$2,101,810 and imports from the

United States at \$3,125,508. The respective 1935 figures were \$3,089,140 and \$2,321,629.

Finance. Public revenues in 1934 totaled 26,412,115 colones and expenditures 26,685,865 colones, leaving a deficit of 273,750 colones. Of the total income, Customs duties provided 13,012,341 colones; the national distillery, 3,338,975; the Pacific Railway, 3,277,163 colones. The service of the public debt took 3,223,580 colones and public education 6,107,905 colones. On June 30, 1933, the total public debt was reported at 107,885,014 colones.

Communications. Costa Rica in 1934 had 413 miles of railway line; the Pacific Ry. from San José to Puntarenas (81 miles) was state owned. Operating receipts of the Pacific Ry. in 1934 were 3,277,163 colones and expenditures 2,484,055 colones. Fifty-five miles of new highway were completed during 1934, including an important automobile road between Zapote and Villa Quesada. An air line from San José to Puntarenas connected with the inter-American air network.

Government. Executive power is vested in a president elected for four years and legislative power in a Congress of 43 members, half of whom are elected (for four-year terms) every two years. Voting is secret and direct and two Communists won seats in Congress in the election of February, 1934. President in 1935, Ricardo Jiménez Oreamuno, who assumed office May 8, 1932.

History. The exchange problem was the major political and economic issue confronting Costa Rica in 1935. The existing system for the control of foreign exchange transactions was modified by the decree of Feb. 23, 1935, which required exporters and other holders of exchange to deliver it to the Exchange Control Board. The Board allocated exchange for imports and other necessary requirements. Due to the excess of imports, however, the demand for exchange greatly exceeded the supply. Consequently about Mar. 1, 1935, the exchange value of the colon began to depreciate rapidly from the official rate of 4.50 colones to the dollar. Towards the end of August it reached a level of about 7 colones to the dollar and it fluctuated near that point during the rest of the year.

The depreciation of the colon had wide repercussions upon Costa Rica's economic life. Imports declined, despite the depletion of stocks; Customs revenues—the principal source of government receipts—fell off sharply; prices of many imported commodities increased; and the financial situation of the coffee growers and other producers of export crops became more favorable. In order to sustain its revenues, the Government was forced to raise the consumption tax on beer and gasoline and to increase other taxes. At the same time it restricted expenditures on public works and other projects, leaving a considerable number of workers unemployed.

In his message of May 1, 1935, to Congress President Jiménez attacked the exchange control law as a failure. He blamed the situation upon the heavy and uncalled for increase in imports by merchants during 1934 and pointed out that the colon could not be stabilized until a favorable trade balance was restored. However he opposed the restriction of imports through operations of the Exchange Control Board, asserting that this would transform the state into an immense bureaucratic machine. Proposals for stabilizing the colon by the borrowing of a large exchange equalization fund were discussed towards the end of the year.

The Government continued its efforts to combat

the growth of communism by social legislation and economic measures. In June it obtained 250,000 acres of land from the United Fruit Co. for distribution to landless peasants. Early in the year the Government entered into an agreement with the United Fruit Co., under which the company undertook to develop banana plantations on the Pacific coast. As a precaution against further social disorders, such as the violent strike of banana workers in 1934, Congress in September appropriated \$40,000 for the rearmament of the Costa Rican army of 500 men.

With the presidential election scheduled for February, 1936, Dr. Jiménez urged in his annual message that the Constitution be again amended so as to permit the election of the candidate receiving the largest number of votes, provided these votes comprised from 33 to 35 per cent of the total. The constitutional amendment of 1934 permitted the election of a presidential candidate who received 40 per cent of the votes cast. Due to the number of candidates, it is seldom that one of them receives a clear majority in the presidential balloting. Naturalization requirements were tightened to bar the influx of foreign agitators. By the constitutional amendment of July 20, 1935, the residence period before naturalization was increased from one to five years. Negotiations for a peaceful settlement of the old boundary dispute between Costa Rica and Panama continued during the year.

COST OF GOODS. See STATISTICS.

COTTON. The Crop Reporting Board of the U.S. Department of Agriculture estimated on Dec. 8, 1935, that the cotton crop for the United States for 1935 would amount to 10,734,000 bales of 500 pounds, compared with 9,636,000 in 1934, and 13,047,000 in 1933. The acre yield of lint was estimated to average 188 pounds as compared with 170.9 pounds in 1934 and 177.1 pounds, the average for the period 1924-33. Of 27,872,000 acres in cultivation July 1, 1935, 1.9 per cent were subsequently abandoned, and 27,331,000 acres were left for harvest.

The world carry-over of American cotton on July 31, 1935, the New York Cotton Exchange Service estimated, was 9,043,000 bales, compared with 10,746,000 at the end of the previous season and 14,405,000 two years ago. Preliminary estimates of the Bureau of Census, placing the carry-over of American cotton in the United States at 7,138,000 running bales, together with the above estimate of world total indicated the carry-over of American cotton in foreign countries on Aug. 1, 1935, at approximately 1,800,000 bales, about 1,200,000 bales less than on Aug. 1, 1934. The New York Cotton Exchange Service estimated the consumption of American cotton during the season ended July 31, 1935, at 11,249,000 bales compared with 13,680,000 in the previous season and 14,405,000 two years previous.

The total world supply of all cotton for the 1935-36 season was estimated in late October to be about 39,900,000 bales, a little larger than in the previous season and 12 per cent above the average for the decade ended 1932-33 but about 6 per cent smaller than the record supply in 1933-34. World carry-over of all cotton on August 1, about 13,600,000 bales, was 15 per cent smaller than a year earlier, but 34 per cent larger than the 1923-32 average.

The world supply of American cotton for the current season was indicated at about 20,500,000 bales, 200,000 bales larger than in 1934-35 and about equal to the average for the 10 years ended

1932-33, but about 5,500,000 bales below the peak supply of 1931-32. The total stocks of American cotton on hand on Aug. 1, 1935, included about 5,100,000 bales that were government-financed compared with about 3,000,000 bales a year earlier.

Production in bales in 1935 in the countries reporting was officially estimated to be, for the United States 10,734,000; India, 4,479,000; U.S.S.R. (Russia), 2,493,000; China, 2,340,000; Egypt, 1,750,000; Brazil (northeastern states), 1,086,000, total about 1,500,000; Mexico, 235,000; Manchuria, 56,000; Korea (Chosen), 175,000; Turkey, 203,000; Greece, 62,000; Nyasaland, 15,000; and Bulgaria, 39,000. The total world production was estimated by the U.S. Department of Agriculture at the close of 1935 at 25,600,000 bales, about 2,000,000 bales more than the unusually small crop of 1934-35. Estimates of the New York Cotton Exchange Service totaled 25,541,000 bales versus 22,612,000 in 1934-35.

The world's production of commercial cotton in 1934 was estimated by the U.S. Bureau of the Census to be 22,869,000 (478 lb.) bales, of which the United States produced 9,472,000 (running) bales; India, 4,475,000; U.S.S.R. (Russia), 1,673,000; Egypt, 1,566,000; China, 2,150,000; Brazil, 1,332,000; Peru, 310,000; Mexico, 223,000; and all other countries 1,668,000 bales.

The United States cotton crop for 1934, as reported by the Bureau of the Census, the estimated crop for 1935, and the quantity reported ginned to Dec. 13, 1935, are shown in the accompanying table.

States	Crop, 1934 500-lb bales	Crop, 1935 ^a 500-lb bales	Bales ^b ginned Dec 13, 1935
United States	9,636,559	10,734,000	9,757,680
Alabama	952,245	320,000	1,025,827
Arizona	116,363	125,000	102,083
Arkansas	874,782	890,000	782,457
California	259,551	205,000	190,533
Florida	23,957	29,000	26,447
Georgia	971,425	1,060,000	1,036,560
Louisiana	484,668	555,000	539,841
Mississippi	1,142,706	1,260,000	1,219,954
Missouri	233,864	200,000	162,388
New Mexico	87,104	78,000	56,737
North Carolina	631,420	585,000	555,176
Oklahoma	317,387	535,000	436,346
South Carolina	681,791	745,000	720,536
Tennessee	404,316	320,000	300,805
Texas	2,407,979	3,050,000	2,570,898
Virginia	32,961	30,000	24,787
All others	14,040	7,000	6,305

^a Estimated ^b Running bales.

The table includes for 1935, under the ginning report, 238,547 round bales counted as half bales and also 13,557 bales of American-Egyptian cotton, practically all grown in Arizona. The 1935 crop of Arizona was estimated to include 17,000 bales of American-Egyptian cotton grown on 38,000 acres. The crop of Lower California, Mexico, usually marketed through California, was estimated at 70,000 bales, not included in the totals.

The oil mills in the United States, during the cotton year ended July 31, 1935, crushed 3,549,891 tons of cottonseed. The products of the seed included 805,083 bales of lint, 913,039 tons of hulls, 1,614,345 tons of cake and meal, and 1,108,582,294 pounds of oil.

Exports of cotton and lint for the year ended July 31, 1935, amounted to 4,798,539 running bales of cotton and 205,246 bales of lint or a total of 5,003,785 bales. The principal exports of cotton (in bales) were to Germany, 341,580; United Kingdom, 738,154; France, 372,656; Italy, 474,106; Spain, 240,235; Belgium, 97,194; other European countries, 601,754; Japan, 1,524,395; China, 108,-

083; and Canada, 225,499. During the same period, the United States imported from Egypt 71,176 bales; British India, 24,903; China, 3185; Peru, 1192; Mexico, 5137; and from other countries, 1438. Exports for the five months ending Dec. 31, 1935, totaled 3,452,266 bales.

The consumption of all cottons in the United States decreased 339,386 bales in 1934-35 or to 5,360,867 bales compared with 5,700,253 bales in 1933-34. The cotton used by American mills was consumed largely, 80.3 per cent, in the cotton-growing States. Of 29,253,444 spindles in place Dec. 31, 1935, 23,391,370 were active during December, of which 17,209,878 were located in Cotton States, 5,525,516 in New England, and 655,976 in other States. The number of active spindle hours averaged in Cotton States 272, in New England 157, and elsewhere 148.

The world's consumption of cotton (exclusive of linters in the United States) for the year ended July 31, 1935, according to the U.S. Bureau of the Census, was about 25,283,000 bales. Estimates based largely on running-bale reports of the International Federation of Master Cotton Spinners' and Manufacturers' Associations were equivalent to slightly more than 23,700,000 bales (478 pounds), slightly larger than the estimated mill consumption of all cotton the previous season, the largest since 1928-29, and somewhat above the average for the 10 years ended 1932-33. Of the total consumption in 1934-35, almost 12,350,000 bales, or 52 per cent, was foreign cotton, and 11,350,000 bales, American. In 1933-34, out of a similar total, a little more than 13,500,000, or 57 per cent was American and 10,100,000 bales, or 43 per cent, was foreign. During the 10 years ended 1932-33, world mill consumption of American exceeded that of foreign growths by about 4,250,000 bales annually. Consumption of American cotton in 1934-35 was, with the exception of 1930-31, the smallest for 11 years, while mill consumption of foreign cotton was the largest in history.

Most of the decline occurring in consumption of American cotton from 1933-34 to 1934-35 was accounted for by the decline in consumption in foreign countries since domestic consumption declined only 300,000 bales. Factors contributing to the decrease in consumption of American cotton in 1934-35 relative to 1933-34 and relative to consumption of foreign cotton in 1934-35 included the relatively high prices of American cotton due in part to reduced supplies of American cotton resulting from the adjustment programme and the drought and to increased supplies of foreign cottons and in part to the 12-cent loan which in effect further reduced the available market supplies of American cotton; difficulties experienced by Germany, Italy, and Poland in obtaining foreign exchange with which to buy American cotton along with special trade arrangements with other cotton-producing countries; and the further shift in cotton processing from Europe to the Orient and the accompanying tendency for foreign-produced cotton to replace American cotton. The consumption (in bales) of the different growths included American cotton, 11,350,000; Indian cotton, 4,650,000; Egyptian cotton, 1,800,000; and sundries cotton, 5,950,000. The total consumption of all cotton in Europe in 1934-35 was reported at slightly less than 9,000,000 bales, compared with almost 9,500,000 bales during the previous season, in Japan 3,350,000, in China nearly 2,500,000, and in India about 2,400,000 bales.

The average price of middling $\frac{7}{8}$ -inch cotton at the 10 spot markets averaged 12.36 cents per pound

during the year ended July 31, 1935, compared with 10.81 in 1933-34, 7.15 in 1932-33, 5.89 in 1931-32, and 15.79 cents in 1929-30. Prices averaged 12.55 cents in January, 1935, 12.47 in February, and 11.57 in March. They averaged in April 11.80 cents; May, 12.33; June, 11.97; July, 12.22; August, 11.37; September, 10.48; October, 10.96; November, 11.98; and closed on December 31 at a range of 11.34 to 11.95 cents in the southern spot markets and at 12.10 in New York. The average prices received by producers at local farm markets on Dec. 15, 1935, were estimated at 11.1 cents per pound for lint and \$31.60 per ton for cottonseed compared with 12.36 cents and \$34.79, respectively, on Dec. 15, 1934. The farm value of the 10,734,000 bales of lint was estimated at \$593,677,000 and of the 4,775,000 tons of cottonseed at \$150,877,000 or a total of \$744,554,000 for the 1935-36 crop.

During the 1934-35 season a 12-cent loan on cotton low middling $\frac{7}{8}$ -inch and better was available to growers. During the latter part of August, 1935, a plan was announced which provided that the Commodity Credit Corporation would make loans on the 1935 crop at 10 cents per pound, basis $\frac{7}{8}$ -inch low middling or better, to cotton producers participating in the cotton adjustment programme in 1935 and who would agree to participate in the 1936 programme. Cooperating farmers were to receive price adjustment payments from the Agricultural Adjustment Administration equal to this difference between 12 cents and the average price of middling $\frac{7}{8}$ -inch cotton in the 10 designated markets on the date their cotton was sold. The payment of the difference was limited to their allotments under the Bankhead Act. The farm value of lint plus price-adjustment payments in 1935-36 was expected to materially exceed those of 1934-35. Estimates were that about 90 per cent of the 1935 crop would be produced by cooperating producers and that the total rental and parity payments to producers, under their 1935 cotton-adjustment contracts, would amount to about \$125,000,000, considerably larger than the \$116,000,000 paid cooperating producers in 1934, and equivalent to about 2.4 cents per pound on the estimated production of the cooperating farmers.

Cotton of the 1935 crop ginned up to Dec. 1, 1935, was lower in grade and averaged about the same in staple length compared to that ginned up to Dec. 1, 1934, according to a report based on the 9,359,389 bales of American upland cotton reported by the Census Bureau as ginned prior to that date, which represented 87 per cent of the estimated 1935 crop. Estimates were that 30.4 per cent was white and extra white strict middling or better, 31.8 per cent middling, about 20 per cent white and extra white strict low middling and below, and about 17.7 per cent spotted cotton compared with 11.9 per cent last season. Although staple length averaged the same in 1934 and 1935, the proportions of cotton $\frac{7}{8}$ -in. and shorter, and $1\frac{1}{16}$ -in. and longer decreased while the proportion of $1\frac{1}{16}$ to $1\frac{1}{2}$ -in. cotton increased in 1935. About 84.8 per cent of the cotton ginned up to Dec. 1, 1935, was tenderable versus 91.1 in 1934.

See TEXAS under *Political and Other Events*.
Bibliography. Consult also *Cotton Literature*, vol. v; *World Cotton Prospects* (monthly); *Agricultural Outlook for 1936*; *Report of the Secretary of Agriculture, 1935*, by H. A. Wallace; *Agricultural Adjustment in 1934*; *Grade, Staple, Length, and Tenderability of Cotton in the United States, 1928-29 to 1932-33* (all U.S. Department of Agriculture, 1935); *Cotton Production in the United*

States, Crop of 1934, and Cotton Production and Distribution, Season of 1934-35 (both U.S. Department of Commerce); *Annual Reports of State experiment stations located in the Cotton Belt; Commodity Exchanges*, by J. B. Baer and G. P. Woodruff, (New York, 1935); *Cotton and the New Orleans Cotton Exchange*, by J. E. Boyle, (Garden City, N. Y., 1934); *Cotton Goes to Market*, by A. H. Garside, (New York, 1935); *Cotton Under the Agricultural Adjustment Act; Developments up to July 1934*, by H. I. Richards, (Washington, 1934); *Government Control of Cotton Production*, by T. A. Rouse, (Austin, Tex., 1935); *Der Kampf um die Weltmacht Baumwolle*, by A. Zischka, (Leipzig, 1935); *Annual Cotton Handbook . . . Season 1935-36*, (Comtelburo, Ltd., London, 1935); *Bombay Cotton Annual, 1933-34*, (1934); *Bombay Mill Owners Association, Report for the Year 1934*, (Bombay, 1935); *British Cotton Growing Association, Report for 1934*, (Manchester, 1934); *Cotton Production in China, 1934*, (Chinese Cotton Statistics Association, Shanghai, 1935); *Cotton Yearbook 1935*, (Marsden & Co. Ltd., Manchester, 1935); *Egyptian Cotton Yearbook for 1933-34*, (Alexandria, 1934); *Indian Cotton Facts 1935*, (Bombay, 1935); *International Cotton Book*, and the *International Cotton Seed Products Directory, 1935-36*, (both Dallas, Tex., 1935); *Skinner's Cotton Trade Directory of the World, 1935-36*, (London, 1935); *Textile Recorder Yearbook, 1935*, (London, 1935); *International Cotton Bulletin*, (Manchester); *Empire Cotton Growing Review*, (London); and *Coton et Culture Cotonnière*, (Paris).

The U.S. Department of Agriculture, particularly the Bureau of Agricultural Economics, issued multigraphed publications on various phases of the cotton industry dealing with a preliminary statement of a cotton research programme; the world cotton situation—foreign cotton production; cotton production in southern Brazil; international trade in cotton in 1934-35; consumption of American and other growths of cotton in Japan; quality of cotton linters produced in the United States, season 1933-34; development of standards for grades of cottonseed; the problem of character standardization in American raw cotton; use of the official cotton standards of the United States (in sales to domestic mills); proposed revisions of the universal standards for grades of American upland cotton; baggings used for covering American cotton bales; bibliographies on the economic development of the cotton textile industry in the United States, 1910-35; and financing American cotton production and marketing in the United States. The Agricultural Adjustment Administration also issued a number of circulars concerned with the cotton adjustment programmes.

COUGHLIN, THE REV. CHARLES E. See MICHIGAN.

COUNCIL-MANAGER PLAN. See MUNICIPAL GOVERNMENT.

COUNTY CONSOLIDATION. See MUNICIPAL GOVERNMENT.

COURT GAMES. As usual, the most popular game, from the point of view of participants, was squash racquets, and in this sport an influx of younger players was noticed. New courts were built in New York, Philadelphia, Boston, and Chicago and the game was adopted by colleges and universities throughout the country in a manner never anticipated.

Donald Strachan, of Philadelphia, formerly a fine lawn tennis player, took the national cham-

pionship in 1935, whipping the defending champion, Neil J. Sullivan also of Philadelphia, in the final. Strachan lost only two games in the tournament. Philadelphia held a virtual monopoly in the winning of important championships. Philadelphia downed Boston in the final round of the national team title event, and it was Stanley W. Pearson, six times former holder of the national singles crown, who won the national veterans' honors. Neil Sullivan and Roy R. Coffin, another Philadelphian, retained their national doubles championship for the third successive year, and four Philadelphia teams made up the semi-final bracket in that tourney. Philadelphia also won the Lockett Trophy intercity matches, downing Boston and New York on successive days. And to round out Philadelphia's impressive record, Sullivan won the Gold Racquet tournament at the Rockaway Hunting Club, downing E. Rotan Sargent, of Harvard University, in the final. Strachan defeated Sullivan for the Atlantic Coast title. The United States won the Lapham Trophy from Canada, defeating the Canadians in Montreal, and Germaine Glidden took the intercollegiate laurels. The United States women surprised by conquering England for the Wolfe-Noel Cup.

Harry F. Wolf, New York Athletic Club player, remained head man in squash tennis for the sixth successive campaign, downing Rowland B. Haines in the final for the championship. Thomas Iannicelli, of Newark, took the world's open crown, abandoned by Frank Ward, who was ill and unable to defend the title held from 1926 through 1934.

Huntingdon D. Sheldon, of New York, regained the national amateur racquets championship defeating Edward M. Edwards, of Philadelphia, 1934 winner, in the final. Sheldon, paired with Joseph W. Brooks, was shorn of his national doubles laurels, bowing to the new champions, Leonard and Malcolm Kirkbride.

Ogden Phipps, youthful New Yorker, remained supreme in court tennis, the most ancient of all the court games, retaining his national singles honors by defeating James Van Alen, and retaining the national doubles crown, teamed with William Rand. New York's forces, led by Phipps, won in the annual intercity competition at the late Harry Payne Whitney's court in December.

Badminton, gentler in some respects than the other games and much more adaptable to home play, leaped into the limelight and the tournaments and exhibitions staged throughout the country were crowded with players and spectators. Jack Purcell, Toronto player, retained his world's professional championship.

COWEN, SIR FREDERICK HYMEN. A British composer, died in London, Oct. 6, 1935. He was born at Kingston, Jamaica, W. I., Jan. 29, 1852, and when four years old was brought to London by his father. His first music lessons were obtained from Henry Russell, and later he studied under Sir Julius Benedict and Sir John Goss. In 1863, he gave a morning concert at Her Majesty's Theatre. The following year he played at Dudley House (his father was secretary to the Earl of Dudley) and in 1865, his composition, a trio in A, was played there by Joachim, Pezze, and himself. He competed successfully for the Mendelssohn Scholarship in that year, but his parents refused to allow him to accept it. He then went to Leipzig to study under Hauptmann, Moscheles, Reinecke, and Plaidy. The Austro-Prussian War caused him to return home and he conducted his composition, an

overture in D minor, at Mellon's Promenade Concerts at Covent Garden. In October, 1867, he returned to Germany and entered the Stern Conservatorium at Berlin, where he studied under Kiel. He arrived in London a year later and appeared at various concerts, such as the Philharmonic, and the Monday Popular. On Dec. 9, 1869, he made his real début as a composer at St. James's Hall, where his symphony in C minor and piano-forte concerto in A minor were given.

Cowen then turned to conducting, and from 1871 to 1877 accompanied Her Majesty's Opera, and in 1880 became conductor of the Covent Garden Promenade Concerts. He led the Philharmonic Concerts from 1888 to 1892, succeeding Sir Arthur Sullivan, and in 1888 was invited to be the conductor at the Melbourne Centennial Exhibition, for which he received the unprecedented sum of £5000. He became conductor of the Hallé Orchestra, Manchester; the Liverpool Philharmonic, and the Bradford Choral Society in 1896, and in 1900 was reelected conductor of the Philharmonic Society as well as of the Scottish Orchestra. He was the conductor for the Handel Festival at Crystal Palace in the years 1903, 1906, 1909, 1912, 1920, and 1923; and for the Cardiff festivals of 1902, 1904, 1907, and 1910.

He received the honorary degree of Doctor of Music from Cambridge in 1900 and from the University of Edinburgh in 1910. The following year he was knighted. Sir Frederick's music was distinguished by a certain fantastic grace of its own, and as a result it was at its best when dealing with fairy tales, and the like. Throughout his operatic work, deeper emotions were handled skillfully, but it was in the lighter mood that he was most successful. In 1913, he wrote his memoirs, *My Art and My Friends*, and two years later published a humorous glossary, *Music As She Is Wrote*.

His many compositions included: the operas *Pauline* (1876), *Thorgrim* (1890), and *Harold* (1895), the oratorio (*Ruth* 1887); a number of cantatas, including *Rose Maiden* (1870), *The Corsair* (1876), and *John Gilpin* (1904); four suites, *Language of the Flowers* (1880), *In Fairyland* (1896), *English Dances* (1904), and *Language of the Flowers* (1914); the ballet, *Cupid's Conspiracy* (1916), *Monica's Blue Boy* (1917), and *Twelve Songs for My Little Ones* (1927), and over 300 songs, duets, piano pieces, etc.

CREDIT. See AGRICULTURE; COOPERATION.

CRETE, krēt. A geographical division of Greece. Area, 3199 sq. miles; population (1928), 386,427. Chief towns: Khania (Canea), the capital, 26,604 inhabitants; Ērackleion (Candia), 33,404. See GREECE under History.

CRICKET. The 1935 cricket season in the United States was enlivened by the visit of the team representing the Bermuda Athletic Association, which toured Eastern Canada, New York, and Providence, playing 19 games, of which the tourists won 11, lost 4, and drew 4. Their captain, W. F. Hayward, headed both the batted and bowling averages and scored a century in the match against the Crescent Athletic Club.

Defeating the eleven of the New York and Metropolitan District Cricket Association in the final, the Philadelphia C. A. won the Dewar Cup competition, revived after three years.

CRIME. As the year 1935 drew to a close, the Columbia Broadcasting System took a poll of 128 editors of leading newspapers and press associations seeking to discover the principal news-stories of the year. It is interesting to note that third on

the list was a "crime story," the trial and conviction of Bruno Richard Hauptmann, the two events exceeding it in interest being the Supreme Court decisions on New Deal legislation and the Italo-Ethiopian war, and that conspicuous runners-up were also crime stories like the kidnaping of George Weyerhaeuser at Tacoma, Wash., and the killing of Arthur (Dutch Schultz) Flegenheimer. Crime continued, therefore, to be a major industry in the United States and studies of it and proposed measures for controlling it were constantly in the news. See LAW; MEDICAL JURISPRUDENCE.

Causes for Crime in New York City. Two potent causes for the rise of criminality were isolated in New York City studies, the increase in the number of jobless boys, and the existence of slums. Police Commissioner Valentine disclosed that 15 per cent of the major crimes during 1934 were committed by young unemployed boys never before arrested. This factor came into prominence at a time when there was a decline in the serious crimes against the person—murder and manslaughter—and a rise in crimes against property—robberies and burglaries. The facts as to the slums were released by Langdon W. Post, Tenement House Commissioner, and referred specifically to the Borough of Manhattan where the contrasts in living conditions are particularly marked. According to the study cited, the ratio of arrests to 1000 population in the several age groups was as follows:

Age	Slum	Non-slum
Under 16	11 36	6 43
16 to 20	42.22	30 28
21 to 25	71.13	49 43
26 to 35	69 66	44 01
Over 36	33 89	20.41

Mr. Post pointed out "that these figures are based on places of residence of the offenders. They may venture afield to commit crime. They may invade Wall Street or Park Avenue, wherever they consider it opportune to challenge the law, but their home life is slumdom . . ." In short, both of these official statements emphasize the economic basis of crime, whether it be against the person or property.

Age of Criminals. An interesting supplement to these two fundamental studies was furnished by the Division of Investigation of the Department of Justice, of which J. Edgar Hoover is head. According to a report released by this agency on Dec. 10, 1935, "Of the persons arrested during the first nine months of 1935, whose records were submitted to the F.B.I., a total of 37.4 per cent were under 25 years of age. Arrests of 19-year-old individuals occurred more frequently than arrests for any other single age group. The serious charges most frequently placed against persons under 25 years of age were larceny, burglary, auto theft, robbery and assault. . . ." (It is interesting to note that these figures, compiled on a national scale, confirm the conclusions of the New York City studies.) A study covering 1388 cities revealed the following offenses:

Murder and non-negligent manslaughter	2,506
Manslaughter by negligence	2,006
Rape	3,176
Robbery	28,067
Aggravated assault	20,142
Burglary	132,487
Larceny	271,541
Auto theft	90,030
Total	549,955

Of the total, 103,462 had records on file with the U.S. Dept. of Justice, indicating the presence of a considerable number of recidivists. About 7 per cent were women. The rate of crime increased with the size of the city; and crimes of violence against persons were commonest in the summer months.

In connection with the work of crime detection, the F.B.I. revealed that on Dec. 1, 1935, it had 6,599,364 index cards on file, most of them covering known criminals or suspects. The total number of personal identification finger print cards on file through voluntary action of citizens had arisen, by the end of November, to 66,180.

Need for New Federal Judges. Naturally with the multiplication of crimes and greater skill in the detection and apprehension of those who commit them, the work of the courts has increased. This situation is reflected in the recommendation of the Conference of Federal Circuit Judges that eight additional district judgeships be created to clear the dockets of accumulated suits. It was revealed that criminal cases pending in United States courts increased from 9478 in 1934 to 11,469 in 1935, and that there was a decline in but one category, private suits, from 36,051 to 27,345. U.S. civil cases increased from 17,303 to 19,257; while bankruptcy cases increased from 63,352 to 65,347. Commenting on this situation Chief Justice Hughes said, on Oct. 7, 1935:

In 16 districts the average interval between joinder of issue and trial is reported as not exceeding six months. In only 15 districts is there a delay of over six months.

The delays as to actions at law and suits in equity have considerably increased since July 1, 1934. These have occurred notwithstanding the most earnest efforts of the district judges to keep up with their work . . .

It was particularly recommended that new judgeships be created in the Southern District of New York, and also in Northern Georgia, Louisiana, Kansas, Oklahoma, Missouri, and West Virginia. Attorney General Homer P. Cummings renewed this request in his annual report to Congress for 1935.

Inadequacy of Local Jails. A further aspect of the situation was brought to the fore on Dec. 24, 1935, when Sanford Bates, director of the Federal Prison Bureau, announced that intensive studies had led to the conclusion that 44 per cent of the local "lock-ups" were to be "condemned" in the sense that they could not be used for housing Federal prisoners. In explaining this harsh verdict, Mr. Bates said that the poor condition of many local jails was attributable to the "fee system" under which a sheriff or jail-keeper receives a fixed rate for each prisoner, regardless of what he spends in boarding and housing the inmate.

"Obviously," Mr. Bates remarked, "a system that starves the prisoner to pay the jailer is an evil." He therefore offered two suggestions for improving conditions: (1) A more efficient system of identification which would make it unnecessary to keep a man without a record in jail while awaiting trial; and (2) the development of State prison farms to replace local jails for prisoners serving sentences. "Under present deplorable conditions," Mr. Bates asserted, "the local jail is often a sort of third degree place for the innocent, where a decent man would be tempted to confess a crime whether he committed it or not, in order to get out of the local jail and into a State institution."

The Problem of Prison Labor. The vexed and ancient problems of prison labor moved toward a solution when, on Sept. 26, 1935, President Roosevelt, by executive order created the Prison Industries Reorganization Administration, com-

posed of Judge Joseph N. Ullman, chairman, Louis N. Robinson, L. N. Collins, Gustav Peck, and James P. Davis. The Administration was allocated \$100,000 and charged with the duty of working out a practicable programme for controlling prison labor and prison-made goods in co-operation with the several States and the District of Columbia.

The Crime Debate. In spite of the fundamental flaws in the social system which lead to the creation of slums and the multiplication of the idle young; in spite, moreover, of the horrifying condition of local jails, the crowding of the courts, and the existence of numerous unsolved penological problems like prison labor, efforts to solve the problem merely by increasing the power of the police to deal arbitrarily with crime go on. As yet no comprehensive programme of crime prevention has emerged from the enormous volume of discussion. Most of the proposals remain on the level of crime detection and punishment.

This is clearly brought out by the fact that the Interstate Commission on Crime devoted its efforts during the year to the formulation of a system of extradition which would make the apprehension of criminals who have crossed State lines after a crime, or who have directed crime from another State, as easy as possible; to the forwarding of the proposal that every one obtaining an automobile license be fingerprinted; and to the formulation of more flexible parole laws with the object of allowing persons on parole to seek employment outside the State, provided the new State of residence will take over the task of supervision. The continuance of this general approach was also evidenced at the crime conference held under the direction of Governor Lehman of New York State which announced that its studies led to such conclusions as the following: (a) the maladjusted child is the future delinquent; (b) the moral and ethical aspects of child training are being neglected; and (c) that something must be done about crime prevention. Nothing concrete emerged, unless the upshot of this conference at which a million words are alleged to have been spoken, is to be discovered in the Governor's message to the State legislature when it convened on Jan. 1, 1936:

From September 30 to October 3 of last year, 900 experts in the various fields of law enforcement convened in Albany, at my invitation, to discuss concrete suggestions for the strengthening and improvement of our machinery of law enforcement. The members of your Honorable Bodies were all invited to that conference, and many of you did attend. The entire proceedings of the conference were later published and made available to those who attended and to hundreds of others who requested copies.

May I add that many have written or told me that the conference was the best they had ever attended and that its deliberations have stimulated in the people throughout the State and nation a deep interest and a strong determination to curb vicious criminals and stamp out their highly organized rackets and devastating activities.

Immediately after the conference, I appointed a committee to assist me in the preparation of a broad programme of legislative and administrative changes, necessary and vital to a vigorous attack upon the criminal element in our society. This committee, under the chairmanship of Charles Polett, counsel to the Governor, has been giving itself most generously to this task. The committee has not yet completed its studies, although it has already submitted to me a number of reports. Later on during the session, I will transmit to your Honorable Bodies my programme on the improvement of the administration of criminal justice.

Equally in line with current approaches to this vexed subject was the announcement made in December that the New York City Police Department, in Co-operation with the WPA and the NYA (both temporary Federal bodies ostensibly concerned with public relief), was about to establish a

series of juvenile community centres to combat juvenile delinquency by teaching methods of healthfully utilizing leisure time. This move, no doubt inspired by the report on the increase of young criminals cited earlier and by the statement of the directors of the Florence Crittenton Missions for Delinquent Girls, that since the depression school teachers, trained nurses, and college students have been turning to them for aid in increasing numbers when the birth of an illegitimate child was imminent, promises to lead to the temporary establishment of centres throughout the city, especially in congested slum areas.

Racketeering. During the year the public attention was chiefly captured by two types of crime, racketeering and kidnaping. With the decline of legitimate business, and especially with the repeal of prohibition, it is alleged that the racketeers have been increasingly tempted to enter other lines, following various methods, but being principally devoted to the monopolization of foodstuffs and to the small-loan and "protection" rackets. While such activities are carried on in various parts of the nation, attention during 1935 was riveted on New York City where, under the direction of Deputy District Attorney Thomas E. Dewey, an investigation of the rackets was undertaken. Mr. Dewey found his task especially difficult because of the reluctance of business men who had been victimized by racketeers to testify for fear of reprisals. He was forced to resort to the tactic of sending a recalcitrant witness to jail for contempt of court. It was announced that a new grand jury to continue the racket inquiry would be impaneled on Jan. 24, 1936.

Kidnaping. A typical cycle of alarm was that precipitated by the Lindbergh kidnaping case of 1932 which came to a climax with the trial and conviction of Bruno Richard Hauptmann in early 1935. Extradited from New York, where he was captured in the Bronx after remarkable and successful efforts in tracking down the elusive criminal, he was indicted and tried in New Jersey to the accompaniment of one of the most amazing and ghastly exhibitions of newspaper and publicity irresponsibility ever perpetrated. Not only did American papers generally engage in the orgy but European papers spent thousands of dollars on cable dispatches and special feature writers arrived to cover the case from places as far away as Sydney, Australia. On Feb. 13, 1935, Hauptmann was found guilty of murder and sentenced to die in the electric chair on March 13. However, he turned to the Court of Error and Appeals by which his appeal was rejected, and then, late in the year, to the Court of Pardons, but no action had been taken as the year ended. Meanwhile, on December 16 he was informed that a new date for his execution had been set for the week of Jan. 13, 1936, and the prison warden started to make his arrangements to carry out the sentence.

On Dec. 23, 1935, the nation and the world was thrown into a fever of excitement by the appearance of an exclusive story in the *New York Times* stating that Colonel Lindbergh, his wife, and his surviving son, Jon, had left the United States secretly with the object of seeking refuge in England. The story asserted that "Threats of kidnaping and even of death to the little lad (Jon), recurring repeatedly since his birth, caused the father and mother to make the decision. These threats have increased both in number and virulence recently." It was recalled that Colonel Lindbergh had been the "victim" of a publicity campaign ever since

his spectacular flight over the Atlantic Ocean to France in 1928 and that the curiosity about him, legitimate and illegitimate, had increased in volume after his marriage to Miss Anne Morrow in 1929.

The publicity inevitably brought thousands of letters, many of them containing threats, most of which were traced by the police authorities and their authors arrested or incarcerated in asylums. The threats, over the years, showed peaks of frequency when Charles Lindbergh, Jr., was kidnaped, when Jon Lindbergh was born in 1932, and with the conviction of Bruno Hauptmann. After the birth of the second child, the threats were chiefly against his life. The final upsurge of such communications came when the case of Hauptmann was once more brought to public notice by the doubts cast upon the correctness of the verdict sentencing him to death. But the final incident which determined the Lindberghs to seek refuge abroad was described by the *Times* as follows:

Not long ago, as Jon was being taken by automobile from his school to his home, a large car containing several men came close alongside and crowded the car containing the lad to the curb, forcing it to stop.

Men jumped down. A teacher accompanying the little lad clutched him tightly. Suddenly cameras were thrust into the child's face and clicked. Then the visitors jumped into their machine and sped away, leaving a badly frightened teacher and little boy.

Since then Jon has not been to school.

The press reaction to this move on the part of the Lindberghs can only be described in Dr. Barnes' terms as a "cycle of alarm" for the episode was taken as a comprehensive indictment of the inadequacy of American police methods, a warning as to the height to which the tide of crime had arisen, and a rebuke to the American people for tolerating the inefficiency of the one and the menace of the other. Only a few public officials dared brave the popular reaction and assert that Lindbergh's course was excessive in the light of the facts.

Other kidnaping news of the year included the solving of the kidnaping of nine-year-old George Philip Weyerhaeuser by the government operatives working under the direction of J. Edgar Hoover. Two of the three persons allegedly participating in this episode were captured and sentenced for long terms in prison, much of the money paid in ransom was recovered, but a third participant, believed to be a known criminal named William Mahan, and the "brains" of the crime, remained at large. The kidnaper of C. F. Urschel, an Oklahoma oil man, was sentenced to 10 years in jail. But as the year closed, two kidnapers, in addition to Mahan, still evaded capture—Alvin Karpis who was involved in a case in Minneapolis, and Thomas H. Robinson, Jr., involved in a case in Louisville, Ky.

The most spectacular "gang-killing" of the year was probably that of Dutch Schultz. This episode has never been fully explained, but a reasonable story was told in *The Nation* for November 20, by Emanuel H. Lavine. According to Mr. Lavine, Schultz was "drilled" because he attempted to cut in on the small loan racket in Brooklyn . . . one of the rackets to which District Attorney Dewey gave attention.

CRIMINAL LAW. See **LAW**.

CROATIA (krô-ă'shi-ă) AND **SLAVONIA**. A former crownland of the Austrian-Hungarian Empire, now incorporated in Yugoslavia.

CROATS. See **YUGOSLAVIA** under *History*.

CROPS. See **AGRICULTURE**, and articles on various crops, such as **CORN**, **TOBACCO**, **WHEAT**, etc.;

also paragraphs on *Agriculture* under various States and on *Production* under countries.

CROSS-COUNTRY RUNNING. College cross-country runners of the Middle West maintained their hold on the two important hill and dale fixtures of 1935, while the East continued its domination of the long distance field.

Donald Lash, junior at the University of Indiana, retained his position as the foremost harrier of the country, again romping in ahead in the national championship cross country run, decisively out-running his field through snow and biting winds at Van Cortlandt Park, New York. The National team championship went to the Millrose A.A., but that was a hollow victory, because the first three men to finish were U. of Indiana runners and the fourth was also a Hoosier. The mid-Westerners didn't have a full team of five at Van Cortlandt Park, however, and weren't eligible for the team crown. The Intercollegiate A.A.A.A. championship went to J. Edward Bechtold of Michigan State, a middle Westerner by training but a New Yorker by birth. Michigan State captured the team title for the third successive year and in most decisive fashion.

In the long-distance field, the national 10,000 meter run was taken by Tom Ottey, former Intercollegiate cross country ruler and the 3000 meter steeplechase went to Joe McCluskey for the fifth time in six starts.

CRUSTACEA. See ZOOLOGY.

CUBA. An island republic of the West Indies. Capital, Havana (Habana).

Area and Population. Cuba has an area of 44,164 square miles, including the Isle of Pines (1180 sq. miles) and other small islands (1350 sq. miles). The estimated population as of Dec. 31, 1932, was 4,075,000 (3,962,344 at the 1931 census). The chief cities, with their estimated 1933 populations, are: Havana, 543,000; Camaguey, 131,583; Santiago de Cuba, 103,497; Santa Clara, 97,181; Cienfuegos, 87,970; Sancti Spiritus, 86,495; Guantánamo, 66,059; Pinar del Río, 63,213; Manzanillo, 63,211; Trinidad, 62,370. Whites comprise about 68 per cent of the population, the remainder being chiefly Negroes and mulattoes. Births in 1933 numbered 66,922; deaths, 48,628; marriages, 10,760.

Education. Elementary education is nominally free and compulsory, but of 852,162 children of school age in 1932 only 426,708 were enrolled in primary schools. Large numbers of pupils do not complete the primary school courses; in 1932, 64.5 per cent of the enrollment was in the first and second grades. The 364 private schools had 26,622 pupils. The secondary schools were in process of reorganization in 1935. Twenty-four high schools were being established to replace the six provincial institutes which formerly provided the only secondary training. The University of Havana, closed for political reasons in 1931, was reopened in 1933.

Production. Agriculture is the main support of the population and sugar is the chief crop, accounting for 68 per cent of the value of all exports in 1933. Production of the 1935 sugar crop was officially restricted to 2,315,000 long tons; actual production was 2,537,385 long tons, as compared with 2,274,303 tons in 1934. The recovery of the Cuban sugar industry from the devastating effects of the world economic depression commenced in 1934, when the United States reduced its tariff on Cuban sugar from \$2 per 100 lb. to \$0.90, and fixed its import quota on Cuban sugar at 1,902,000 short tons (raw value). The 1935 import quota was 1,857,022 short tons.

Exports of raw sugar in 1935 totaled 2,398,734 long tons, of which 1,609,964 tons went to the United States. In 1934 total exports were 2,344,947 long tons and shipments to the United States were 1,581,548 tons. The average price for 96° sugar in warehouse at Havana for export for 1935 was 1.58073 cents per lb., compared with 1.195409 cents in 1934. The estimated stock of raw sugar in Cuba at the close of 1935 was 652,004 long tons (808,339 on Dec. 31, 1934). The production quota for 1936 was fixed at 2,515,000 long tons.

The tobacco crop, ranking second in importance, totaled 45,619,695 lb. in 1934 (36,352,032 lb. in 1933); coffee, 31,400 metric tons in 1932-33. Shipments of fresh vegetables to the United States in 1934 totaled 58,901,841 lb.; of fruit, 23,718,000 lb. (exclusive of 705,907 crates of pineapples). Cacao, corn, cereals, and potatoes are other crops. Live-stock in 1933 included 4,316,862 cattle, 585,739 horses, 102,000 sheep, 591,000 swine, and 77,990 mules. The forests yield valuable cabinet and dye woods. The production of iron ore in 1933 was 169,000 metric tons; manganese (exports, 1933), 41,512 tons; copper ore (exports, 1933), 24,322 tons. Numerous small manufacturing industries have been developed with the aid of a protective tariff, the chief products being foodstuffs, clothing, footwear, paints, paper, textiles, furniture, and cement. Rum manufacture was stimulated by the repeal of prohibition in the United States.

Foreign Trade. After declining rapidly during the period 1929-33, Cuba's foreign trade expanded noticeably in 1934, as shown in the accompanying table. Trade with the United States is included

CUBAN IMPORTS AND EXPORTS

[In thousands of dollars]

Year	General imports	Imports from U. S.	Total exports	Exports to U. S.
1929 . .	\$216,215	\$127,051	\$272,440	\$208,774
1930 . .	162,452	91,872	167,411	116,051
1931 . .	80,112	45,940	118,866	89,074
1932 . .	51,024	27,653	80,672	57,482
1933 . .	42,362	22,674	84,391	57,112
1934 . .	73,388	41,225	107,746	81,094

Exports exceeded imports by \$34,358,000 in 1934 (\$42,029,000 in 1933). The other leading sources of supply, after the United States, in 1934 were: British India, \$4,580,427; Spain, \$4,051,252; United Kingdom, \$3,941,149; Japan, \$3,136,090 (\$857,004 in 1933); Germany, \$2,905,194. The United Kingdom purchased Cuban exports to the value of \$14,498,311; France, \$3,155,483; Spain, \$2,374,868. The value of sugar exports in 1934 was \$73,993,000 (\$53,972,000 in 1933) and the volume was 2,458,000 long tons of raw and refined sugar (2,408,000 in 1933). Tobacco exports totaled \$14,498,147 (\$13,395,306 in 1933).

United States statistics for 1935 showed imports from Cuba of \$104,638,523 (\$78,928,916 in 1934) and exports to Cuba of \$60,152,732 (\$45,323,374 in 1934).

Finance. Budget estimates for the fiscal year ended June 30, 1936, placed receipts at 62,250,000 pesos and expenditures at 65,125,199 pesos. The budget made provision for resumption of amortization payments on the so-called "Morgan and Speyer Loans," but no provision was made for servicing the Cuban Public Works securities. Revenues from taxes pledged to the latter obligations were to be credited to the general revenues, as in 1934-35. The principal expenditures items were: National Defense, 14,536,000 pesos; education, 11,089,000 pesos; public debt service, 7,095,000 pesos. The 1934-35 budget estimated ordinary

revenues at 56,200,000 pesos and expenditures at 55,395,000 pesos. Actual revenues were 64,702,000 pesos in 1934-35 and 45,750,000 pesos in 1933-34.

According to an official statement, the Cuban public debt as of Feb. 28, 1935, totaled 149,477,000 pesos, divided as follows: External, 50,399,000; internal, 7,717,000; public works debt, 80,867,000; sugar stabilization bonds, 10,494,000. Dollar bonds issued or guaranteed by the Cuban Government outstanding as of Dec. 31, 1934, amounted to \$91,878,100, of which \$40,000,000 were in default as to interest and \$51,878,100 were in default as to sinking fund. The peso (par value, \$1.6931) exchanged at approximately \$1 in 1932, 1933, and 1934.

Communications. Cuba in 1933 had 3043 miles of public service railways, besides some 5600 miles of private lines operated by sugar plantations. Transportation of the sugar crop normally provided about 80 per cent of the total operating revenues. The railways in 1935 were meeting serious competition from buses and trucks, especially those operating on the new Central Highway, running almost the length of the island from Pinar del Rio to Santiago de Cuba (706 miles). The highway network aggregated more than 2000 miles. Air lines connect the chief Cuban cities and extend from Havana to the United States, Mexico, and South America. Vessels entering and clearing the ports in the overseas trade in 1933 numbered 6209, of 32,603,429 gross tons.

Government. Following the deposition of President Machado on Aug. 12, 1933, the Constitutions of 1901 and 1928 were declared null and void. Successive provisional governments were formed by Dr. Carlos Manuel de Cespedes (Aug. 12, 1933), Dr. Ramon Grau San Martin (Sept. 5, 1933), and Col. Carlos Mendieta (Jan. 18, 1934). The Mendieta Government on Feb. 3, 1934, issued a temporary organic law, under which elections for a Constituent Assembly to draft a new Constitution were to be held in 1935 (see *History*). By the decree of June 12, 1935, the provisional Constitution of Feb. 3, 1934, was set aside and the 1901 Constitution was restored with certain modifications.

HISTORY

Internal Politics. By 1935 the Cuban revolution of 1933 seemed to have spent much of its force. The revolt was aimed not only at the discredited Machado dictatorship but also at the chronic political misrule which Machado symbolized. It demanded far-reaching reforms in the economic system fastened upon the island by American capital, which deprived Cubans of both economic independence and security and tended to degrade Cuban political and social life. However, the opportunity for thorough-going national reconstruction presented following the collapse of the Machado Government was wasted during 1934, due to innumerable divisions among the revolutionary forces and the inability of Cubans generally to cooperate in political and economic affairs. By the beginning of 1935 the masses of the people were apparently weary of violence and political strife, disillusioned, and desirous only of conserving the economic gains registered as a result of the world economic upswing and the reciprocity treaty concluded in 1934 with the United States. The island appeared to be headed for a permanent military dictatorship under Col. Fulgencio Batista, the former army sergeant who emerged from the revolutionary welter of 1933 as commander-in-chief of the army, or for a return

to the corrupt pre-revolutionary political system.

The elections for a Constituent Assembly, originally set for December, 1934, had been postponed until March, 1935, because of continued unrest and disorder. Aroused by sabotage in the cane fields, which threatened to nip Cuba's returning prosperity in the bud, the Mendieta Government on Jan. 15, 1935, suspended constitutional guarantees and took drastic measures to punish incendiaries and others. President Mendieta also continued his fruitless efforts to unite the various warring political factions on a common programme, even offering to resign if they could agree upon his successor. The so-called *Auténticos*, headed by ex-President Grau San Martin, the formerly powerful, semi-Fascist ABC group, and several others whose leaders had gone into exile during 1934, refused to cooperate on any other basis than the immediate resignation of both the President and Colonel Batista. At the same time the *Auténticos* and ABC adherents were in open warfare with one another.

The President's effort to conciliate the students of Havana University proved equally useless. In February, in response to the student agitation, Mendieta granted practically all their demands, including larger appropriations and the autonomous control of university affairs. After ousting many professors accused of siding with the hated Machado régime, and turning the curriculum and administrative system upside down, the students began to convert the university into an armed base for the violent overthrow of the Mendieta Government. On February 12 they organized a strike, accompanied by bombing and other forms of violence, for the restoration of constitutional rights, more adequate financial support of education, and the curbing of the army's power. The strike soon spread to the secondary and grade schools, closing every educational institution on the island. It then became openly political, demanding the immediate resignations of the President and Colonel Batista. As such it was joined by all the Opposition groups, including the *Auténticos*, the ABC, radical labor unions, Communists, and even by most of the employees of the government departments. By March 11 it was estimated that more than 400,000 students and workers were on strike and the economic life of the island was practically paralyzed.

Although many of his cabinet members resigned, President Mendieta, with Colonel Batista's support, met the emergency with firmness. The university and the secondary schools were closed and placed under military control. A state of siege, declared on March 9, permitted the extension of military rule over all six provinces, and this was followed two days later by the declaration of a "state of war." President Mendieta declared on March 11 that the revolutionary general strike was aimed at the foundations of the Republic and that he could not yield to it. He repeated his promise to hold fair elections as soon as possible. After days of tense struggle the largely passive resistance of the strikers was crushed by Batista's troops, but not until a dozen persons had been killed, scores injured, and some 800 arrested. Many other opponents of the government fled into exile.

For several months Cuba remained under a rigid military dictatorship. All Opposition newspapers were suspended, the labor unions which took part in the strike were dissolved, the autonomy of the University of Havana was withdrawn, and on April 9 even the high schools were closed for the remainder of the term. Military governors

ruled the provinces and military supervisors were placed over each district. The government services and the schools were purged of Oppositionists, and their places filled in many cases with relatives and friends of the army. On May 8 Batista's troops eliminated their chief's most dangerous enemy, when Dr. Antonio Guiteras, a former radical member of Grau San Martín's cabinet and leader of the Young Cuba Party, was killed in a minor battle near Matanzas.

Once in full control of the situation, President Mendieta renewed his efforts to carry through the promised elections. On April 30 he reached an agreement with four of the old-line political parties for the holding of the elections on November 1; subsequently they were postponed to December 15. The agreement was accepted only by the President's own party (the Nationalists), the Democrats, the Republicans, and the remnants of Machado's old party (the Liberals). The new revolutionary parties—*Auténticos*, ABC, and Young Cuba—declined to participate in the elections and gave notice that they would not accept the outcome.

To pave the way for the elections, the government on June 12 proclaimed the old Constitution of 1901 as in effect, with certain modifications. The political campaign now got under way in earnest. Ex-President Machado's old Liberal party was the first in the field with a candidate, nominating Dr. Carlos Manuel de la Cruz. His prospects were weakened, however, by the opposition to his candidacy of a minority faction of Liberals. On October 12 the Democratic party nominated Mario G. Menocal, President of Cuba for two consecutive terms from 1913 to 1921. These moves hastened the coalition of President Mendieta's Nationalists with the Republicans headed by Dr. Miguel Mariano Gómez, and on October 20 Dr. Gómez was nominated as their joint candidate. Later the dissident faction of Liberals united with the Nationalist-Republican coalition in support of Dr. Gómez. The newly organized Centrist party nominated Dr. Carlos Manuel de Céspedes, who had served as Provisional President for a short time following the overthrow of President Machado in 1933.

On November 20 the Cuban Supreme Electoral Tribunal blasted the hopes of the coalition by ruling that the minority Liberals could not vote for Dr. Gómez but must support Dr. Carlos Manuel de la Cruz as the candidate of the majority of their party. The coalition vigorously protested the ruling. Threatening to withdraw from the election, they urged President Mendieta to annul the court's decision or to reform the electoral code. The Democrats and majority Liberals in turn threatened to boycott the election if this was done. Unable to break the deadlock among the parties President Mendieta on November 27 indefinitely postponed the December 15 election. He announced that Prof. Howard Lee McBain of Columbia University, who had proposed electoral reforms for Cuba in 1933, would be invited to draw up a new electoral code acceptable to all parties. This decision was acclaimed by the coalition but the Democrats and majority Liberals declared they would not accept postponement of the election beyond the end of December nor approve Dr. McBain's intervention in any rôle except that of adviser and conciliator among the parties.

Pres. Harold W. Dodds of Princeton University was then invited by the government to suggest a solution for the political tangle. His proposal that

the majority and minority Liberal electors should choose between Drs. Gómez and de la Cruz was accepted. On December 18 they voted to back Gómez, thus eliminating the candidacy of de la Cruz. Fearing that the Dodds ruling would strengthen Gómez, General Menocal had previously refused to continue in the race unless President Mendieta resigned. Accordingly the President submitted his resignation on December 11 and was succeeded by Secretary of State José A. Barnet y Vinageras on December 13. Thereafter preparations were made for holding the elections on Jan. 10, 1936.

Legislation, etc. While the Mendieta Government took the position that its main function was the holding of elections and the restoration of a constitutional régime, it nevertheless took some hesitant steps in the direction of social welfare legislation and the improvement of economic conditions. The decree of Apr. 12, 1935, established a Superior Labor Council to serve the Department of Labor in an advisory capacity. Another decree of May 7, 1935, established employment offices in five provincial capitals. Provisions of the latter law gave the government a powerful club to hold labor in line. It provided that every employer must inform the employment office in his province of all changes among his employees. Vacant positions were to be filled from lists of applicants provided by the employment office and no employer might hire an employee lacking a registration card from his district office. Labor unions were also obliged to report all cases of dismissal, employment, and reemployment affecting their members.

To keep the cost of living down, the government extended for six months beginning Oct. 2, 1935, the application of the minimum tariff on foodstuffs and other essential commodities imported from countries other than the United States. The civil-service law was restored. In an effort to force other countries to buy more from Cuba, a 25 per cent surcharge was laid on imports from countries with which Cuba's balance of trade was heavily unfavorable. The Cuban Institute for the Stabilization of Coffee was organized on Mar. 7, 1935, in accordance with a law signed by the President January 24. Its function was to promote the cultivation of coffee and to recommend legislation for that purpose.

Relations with the United States. The relations between the United States and Cuban governments remained extremely cordial during 1935, but in Opposition circles in Cuba there was much criticism of the active part which they declared United States Ambassador Caffery was playing in supporting the Mendieta régime. The favorable economic developments of the year in Cuba were clearly attributable in part to reduction of the United States tariff on sugar and other provisions of the 1934 trade treaty. Appreciation of the policy of economic cooperation followed by the United States was expressed by a delegation representing the Social-Economic Union of Cuba, which visited Washington in August. They presented President Roosevelt with a testimonial signed by 320,000 Cubans.

A self-appointed committee of American Communists and radicals arrived in Havana July 2, with the announced intention of conducting an inquiry into the repressive measures used by the Mendieta régime. The Cuban police shipped them home on the same boat, holding them incommunicado until the vessel sailed. Their demand for the dismissal of Ambassador Caffery was answered by President Roosevelt on August 2 by a state-

ment declaring the Ambassador to have the full confidence of the Washington Government. In August a committee representing American holders of Cuban Public Works' bonds issued by the Machado Government visited Havana in an effort to induce the Mendieta régime to resume payment of interest on these bonds. President Mendieta informed them that his government would leave this question to be decided by the constitutional government later to be constituted. The committee, consisting of Senators Gerald P. Nye and Burton K. Wheeler, Dr. Max Winkler, and Albert Coyle, declared that the least the Cuban Government could do under the circumstances was to place the special public works' taxes pledged as security for the bonds in a separate trust account.

Another important event in Cuban-American relations was the publication on Jan. 27, 1935, of the Report of the Commission on Cuban Affairs, entitled *Problems of the New Cuba*. The commission, consisting of 11 American experts organized by the Foreign Policy Association, made a survey of Cuba in 1934 at the request of President Mendieta, who desired the guidance of unbiased foreign experts in formulating solutions for Cuba's many pressing problems. The comprehensive report declared that complete social and economic reconstruction was the only alternative to chaos in Cuba, and suggested a detailed programme of agrarian reform, agricultural diversification, financial reorganization, etc. The ten principal recommendations were as follows:

A land policy under which the Cuban Government would acquire land for the purpose of developing small holdings, making compensation in internal bonds or cash.

The development of a programme of diversification by (a) establishment of agricultural colonies, (b) promotion of agricultural research and education, (c) creation of a marketing organization under government auspices, (d) adoption of a scientific tariff policy.

The development by the Cuban Government of a programme of agricultural education, public health nursing, medical research and social welfare.

A soil survey, initiated with the assistance of foreign surveyors, for the purpose of providing a scientific basis for diversified agriculture, forestry and dairying, and for the development of independently owned small farms.

The enactment of legislation requiring each sugar central to set aside land on which its workers may produce food, and to appoint a full-time sustenance manager to develop food production.

An international sugar agreement under which leading sugar-importing countries would agree to adopt the quota system of the United States and under which the life of the Jones-Costigan Act and the Chadbourne plan would be extended. The chief purpose of such an agreement would be to increase the world price of sugar.

The imposition of a tax on unused land for the purpose of encouraging the development of millions of acres of uncultivated areas in private hands, and also of a progressive export tax on sugar for the purpose of increasing revenue and imposing a brake on undue expansion of sugar following a marked price increase.

The establishment of an Agricultural Bank to encourage diversification and local cooperative associations.

The adoption of a dollar-exchange currency system, which would give Cuba a safe and equitable national currency and which might yield to the Cuban Government an initial profit of about \$15,000,000 and an annual revenue of a million dollars.

The establishment of a Public Utilities Commission, to have jurisdiction over light, power, telephones, railways, and highways.

Other Events. A hurricane of great intensity struck the south coast of Cuba on September 28 and cut a devastating path 150 miles wide through Santa Clara province. It took a toll of 50 lives and 450 persons were injured, most of them in the town of Cienfuegos. Great damage was done to sugar cane and other crops.

CUMBERLAND PRESBYTERIAN CHURCH. One of the Presbyterian bodies whose chief strength is in the Southern States. It was

formed in 1810 when the so-called anti-revival party of the Presbyterian Church in the United States of America objected to the admission into the ministry of men who were not up to the usual literary and theological standards, and to the doctrine of fatality as taught in the third and tenth chapters of the Westminster Confession of Faith.

A general assembly which meets annually is the supreme judiciary, the 1935 meeting being held in McKenzie, Tenn., June 13-18. In 1935 there were 1152 churches, reporting 785 ministers and a church membership of 71,059, in the denomination's 10 synods and 62 presbyteries. The Sunday school enrollment was approximately 55,000. The property of the church was valued at \$3,864,000, not including a \$500,000 endowment for education.

Missionary work is carried on among the Indians in the United States, in China, and South America. The denomination maintains Bethel College and the Cumberland Presbyterian Theological Seminary, both in McKenzie, Tenn. Its official organ is the *Cumberland Presbyterian*. The Rev. Davis of Memphis, Tenn., was moderator of the general assembly in 1935, and the Rev. D. W. Fooks of Nashville, Tenn., was stated clerk, treasurer, and general secretary.

CURAÇAO, koo'ra-sá'ô; kû'ra-sô'. A colony of the Netherlands, consisting of two groups of islands 500 miles apart: (1) Curaçao, Bonaire, Aruba, just north of Venezuela, (2) St. Martin (southern part), St. Eustatius, Saba, just west of the Virgin Islands. Total area, 403 sq. miles; population (Jan. 1, 1934), 79,395. Willemstad (capital) on Curaçao island, had 20,972 inhabitants.

Production and Trade. Maize, beans, pulse, salt, phosphate of lime, and cattle, were the main products. Oil refining was the principal industry. In 1933, imports were valued at 150,268,613 guilders; exports, 194,560,473 guilders.

Government. The budget for 1935 estimated revenue at 6,482,700 guilders; expenditure, 6,478,453 guilders. A governor administers the colony, aided by a privy council of four members and a colonial council of 13 members all nominated by the Queen. Governor in 1935, B. W. T. van Slobbe.

CURLING. For the first time in seven years, United States curlers early in 1935 carried off the coveted Gordon International Medal, leading trophy in the sport. Playing against the Canadian branch of the Royal Caledonian Society at Montreal, the United States players triumphed, 185 to 179. It was the eleventh time the United States had won the medal since it was put up in 1883 by Robert Gordon.

The Schenectady Curling Club retained the Gordon National Medal, with R. D. Thompson as skip, and the Utica Curling Club captured most of the other important fixtures, with the exception of the Stockton Cup, which was taken by the Brookline C. C. Utica captured the St. Andrews Medal, the R. L. S. Memorial, the W. Fred Allen Memorial, the Mitchell Medal, the Paterson Memorial, and the Munson Shield.

CURRENCY. See COINS, VALUE OF; FINANCIAL REVIEW; INTERNATIONAL BANKING; MONEY; UNITED STATES.

CUTTING, BRONSON (MURRAY). An American senator, died in an aeroplane accident near Atlanta, Mo., May 6, 1935. Born in Oakdale, L. I., June 23, 1888, he graduated from Harvard University in 1910. Owing to failing health, he went west and settled in the Territory of New Mexico. In 1912, with health restored, Mr. Cutting seeking an occupation engaged in politics as the Territory

was then about to be admitted to the Union. Politically, Cutting was attracted by the "Bull Moose" Party in 1912, and for two years was treasurer of the Progressive State Central Committee and chairman from 1914 to 1916. From 1915 to 1917 he was a member of the Executive Committee of the New Mexico Taxpayers' Association. He turned to journalism, also, in 1912, purchased *The New Mexican*, the oldest newspaper in the State, and began a drive against corrupt politics. In the same year he became president of the New Mexico Printing Co., which he served until 1918. In 1920 he was elected president of the Santa Fe-New Mexican Publishing Corporation.

During the World War, Mr. Cutting was a military attaché at the American embassy in London and for his services was awarded the British Military Cross. After the War he returned to politics, and brought out a Spanish edition of his newspaper entitled *El Nuevo Mexican*. In 1920 he was appointed regent of the New Mexico Military Institute and in 1925 was chairman of the Board of Commissioners of the New Mexico State Penitentiary.

Governor Richard Dillon appointed him Senator from New Mexico in December, 1927, to fill out the unexpired term of the late Sen. A. A. Jones. He was elected in November, 1928, for the full term ending in March, 1935, and had been reelected in November, 1934, although the election was contested by his opponent. Senator Cutting was considered one of the most liberal-minded in the Senate, and had served on such important committees as Banking, Foreign Relations, Irrigation, and Manufactures. He favored freedom for the Philippine Islands, leading the fight to pass the freedom bill over President Hoover's veto; the payment of the soldiers' bonus, and recognition of the Soviet Union. Although a Republican, he supported the election of Franklin D. Roosevelt in 1932.

Mr. Cutting was active in the American Legion, having been national executive committeeman from 1919 to 1920; departmental commander, 1923-24; department adjutant, 1925-27. Also, he was interested in the archaeology of the Southwest and was a member of the Archaeological Institute of America and the Southwestern Anthropological Society.

CYCLING. Two champions retained their crowns in 1935 cycling, a season in which eight new titleholders arose in the 10 standard divisions of the sport. Probably the most notable of all the bicycling performances was turned in by Joseph Scherens, sturdy Belgian rider, who won his fourth consecutive professional sprint championship of the world. The only other champion to repeat 1934 conquests was Willie Honeman of Newark, who won the professional sprint championship of the United States for the second successive year.

Charles Lacquehay of France, became again the world's champion among the motor-paced riders, replacing Eric Metze of Germany. Lacquehay was champion in 1933. Jean Aerts, Belgian, succeeded his compatriot, Karl Kaerze, as world's professional road champion. Tony Merkens of Germany became world's amateur sprint ruler, dethroning Benedetto Pola of Italy, and Ivo Mancini, Italian, won the amateur road honors of the world. Norman Hill replaced George Dempsey as national professional all-around champion and Franco Georgetti regained the national professional motor-paced crown. Albert Sellinger of Newark, N. J., won the national amateur sprint title. Gustav Kilian and Heniz Vopel, Germans, spread-eagled the

six-day field, winning at Montreal, Pittsburgh, Chicago, and New York in quick succession in their first appearance in the United States.

CYPRUS. A British crown colony. Area, 3584 sq. miles; population (1934), 361,350 compared with 347,959 (1931 census). Most of the people belonged to the Christian faith and 65,300 were Moslems. Chief towns: Nicosia (capital), 23,677 inhabitants in 1931; Limassol, 15,066; Larnaca, 11,725; Famagusta, 8771; Paphos, 4467; Morphou, 4335; Kyrenia, 2049.

Production and Trade. Wheat, barley, tobacco, grapes, carobs, olives, citrus fruits, cotton, and potatoes were the chief agricultural products. Sponge fishing was a minor industry. Pyrites, asbestos, chromite, copper, gypsum, and terra umbra were the main minerals produced. In 1934, imports were valued at £1,419,162; exports, £1,079,427.

Government. For 1934, revenue (exclusive of grants-in-aid) amounted to £763,672; expenditure (exclusive of expenditure from grants and the Cyprus share of the Turkish Debt charge), £710,912. Since the riots of November, 1931 (see *NEW INTERNATIONAL YEAR BOOK*, 1931) the power to make laws has rested with the Governor (in 1935, Sir H. R. Palmer).

History. Early in 1935 the Governor issued a proclamation directing that the English language was to be taught in all schools from Sept. 1, 1935.

CYRENAICA. See LIBYA.

CYTOGENETICS. See BOTANY.

CZECHOSLOVAKIA, čěsk'ô-slov'va'k'î-â. A central European republic, established Oct. 28, 1918. Capital, Praha (Prague).

Area and Population. The area and population of Czechoslovakia, by provinces, at the censuses of 1930 and 1935 are shown in the accompanying table. The 1935 figures are preliminary.

CZECHOSLOVAKIA· AREA AND POPULATION

Province	Area, sq miles	Population	
		1930	1935
Bohemia	20,102	7,109,376	7,220,000
Moravia and Silesia	10,334	3,565,010	3,623,000
Slovakia	18,882	3,329,793	3,471,000
Ruthenia	4,877	725,357	780,000
Total	54,195	14,729,536	15,095,000

During the five-year period 1930-35 the rate of increase of population was five times higher in Slovakia and Ruthenia than in the more highly developed western sections of the country. Live births for the entire country in 1934 numbered 283,757; deaths, 199,203; marriages, 118,270. The 1930 population included 9,688,943 Czechoslovaks, 3,231,718 Germans, 692,121 Hungarians, 549,043 Russians, 186,474 Jews, and 81,741 Poles. Census populations of the chief cities (1930) were: Praha (Prague), 848,823; Brno (Brunn), 264,925; Moravská Ostrava, 125,347; Bratislava (Pressburg), 123,884; Plzeň (Pilsen), 114,704. In 1930 there were 10,833,423 Roman Catholics, 1,109,229 Protestants, 854,638 professing no religion, 585,439 Greek and Armenian Catholics, 356,768 Jews, and 145,598 of the Orthodox faith.

Education. Elementary education is compulsory for children from 6 to 14 years of age and there is almost no illiteracy, except in Slovakia and Ruthenia. In October, 1933, there were 15,236 elementary public and private schools, with 1,853,076 pupils; 1911 advanced elementary schools, with 417,815 pupils; 354 secondary schools and teachers' training colleges, with 94,335 pupils; 666 technical schools, with 95,901 pupils; and 16 institu-

tions of university rank, with 32,831 students. The four principal universities (2 Czech, 1 German, and 1 Slovak) had 21,506 students in 1932-33; the four technical high schools, 10,373 students.

Production. Czechoslovakia is a rich agricultural, mining, and lumbering country and the northwestern section is one of the most highly developed industrial regions in Europe. About 40 per cent of the population is engaged in agriculture and forestry. Yields of the chief crops in 1934 were (in metric tons): Wheat, 1,361,200; rye, 1,523,300; barley, 1,034,400; oats, 1,179,000; corn, 247,100; potatoes, 7,764,600; sugar beets, 3,860,000; tobacco, 14,600; hops, 7000; flax, 5100. The 1934 wine production was 203,000 hectoliters (of 26.42 U. S. gal. each). Beet sugar output in 1934-35 was 557,000 metric tons. Livestock on Jan. 1, 1934, included 4,404,796 cattle, 700,658 horses, 3,429,919 swine, 475,881 sheep, and 929,631 goats.

The mineral and metallurgical production in 1934 was (in 1000 metric tons): Coal, 10,775; lignite, 15,261; coke, 1345; pig iron, 600; steel, 953; zinc, 7.5; salt, 157 (1933). Some manganese, copper, graphite, silver, and garnets also are produced. Industrial establishments in 1932 numbered 1335, with a share capital of 8,720,000,000 crowns. There were 284 concerns producing foodstuffs and beverages, 157 in the metal industry, 100 in textiles, 99 in stone and earthen wares, 85 in the chemical industry, 56 operating woodworking establishments, 28 in glass. The rayon production in 1934 was 2580 metric tons. Beer production (1934) was 7,996,000 hectoliters. There is an important shoe-manufacturing industry.

Foreign Trade. Imports in 1934, excluding bullion, were valued at 6,363,993,000 crowns, compared with 5,799,891,000 in 1933 and 19,988,000,000 in 1929. Exports amounted to 7,276,672,000 crowns (5,841,303,000 in 1933 and 20,499,000,000 in 1929). The leading imports, by value, were in 1934 (in 1000 crowns): Woolen goods, 686,908; cotton goods, 679,265; cereals, 244,423; mineral oils, 213,924; iron and steel, 201,862. The chief exports were (in 1000 crowns): Iron and steel, 875,576; cotton goods, 603,321; glass, 596,962; woolen goods, 569,509; coal, 449,117; leather and leather goods, 349,471. Germany was the chief source of imports, followed by France, the United Kingdom, and Austria. Exports went mainly to Germany, Austria, the United States, and the United Kingdom.

Imports in 1935 totaled 6,707,619,000 crowns and exports were 7,402,694,000 crowns. United States statistics for 1935 showed imports from Czechoslovakia of \$21,365,760 (\$17,552,264 in 1934) and exports to Czechoslovakia of \$3,244,457 (\$2,743,905 in 1934).

Finance. Provisional returns for the calendar year 1934 showed a combined deficit in the ordinary and extraordinary budgets of about 705,000,000 crowns against 1,703,000,000 crowns in 1933. The ordinary budget showed a deficit of 342,000,000 crowns on expenditures of 8,111,000,000 crowns, compared with an ordinary deficit of 1,553,000,000 crowns in 1933. The total budget for 1935 estimated receipts at 7,985,300,000 crowns and expenditures at 7,983,300,000 crowns, excluding fiscal monopolies and undertakings.

The public debt totaled about 43,000,000,000 crowns on June 30, 1935, as against 39,367,000,000 crowns on Dec. 31, 1934. The par value of the crown (koruna) through January, 1934, was \$0.0296. With the devaluation of the U. S. dollar it became \$0.0502. The crown in turn was devalued

on Feb. 17, 1934, to a par of \$0.0418. Average exchange value in 1933, \$0.0380; in 1934, \$0.0424.

Communications. Railway lines in 1933 extended 8800 miles (state lines, 7079). All railways in 1933 carried 38,080,000 tons of freight and 193,000,000 passengers. The highway network aggregated about 55,000 miles. The Danube, Vltava, and Elbe rivers are important traffic arteries. There were 22 air routes in operation in 1931 (16 international and six national).

Government. The democratic Constitution of Feb. 29, 1920, vested executive power in a President, elected for seven years by the two chambers of Parliament in joint session. The President appoints and recalls cabinet ministers. Legislative authority rests in a Senate of 150 members, elected for eight years, and a Chamber of Deputies of 300 members, elected for six years. President in 1935, Thomas Garrigue Masaryk, elected Nov. 18, 1918, and reelected in 1920, 1927, and 1934. Thirteen political parties were represented in Parliament in 1935, with no one holding a majority. The coalition ministry in office at the beginning of 1935 was headed by Jan Malypetr (Czechoslovak Agrarian).

HISTORY

The General Election. The general parliamentary election held May 19, 1935, brought fewer changes than might have been expected in a Parliament whose six-year tenure had carried it unchanged through the world economic depression and a period of epochal political developments in Europe. The standing of the Czechoslovak parties underwent little change but the German Social Democratic, Agrarian, and Catholic parties suffered heavily as a result of defections of their followers to the new Sudeten German party, led by the so-called "Czechoslovak Hitler," Konrad Henlein. The Sudeten German party polled 1,294,000 votes, or more than any other political group, and emerged with 44 seats in the Chamber, one seat less than the number captured by the largest Czech party.

The standing of the Czechoslovak parties in the new Chamber, with their previous standing in parentheses, was: Agrarians, 45 (46); Social Democrats, 38 (43); Communists, 30 (30); National Socialists, 28 (32); Czech Catholic People's party, 22 (25); Slovak Catholic People's party, 22 (19); National Democrats, 17 (14); Middle Class (Traders) party, 17 (12); Fascists, 6 (0). The standing of the German and Magyar minority parties was: Sudeten Germans, 44 (0); Social Democrats, 11 (21); Agrarians, 5 (16); Catholic People's party, 6 (16); Magyar and Sudeten-German electoral bloc, 9 (0). The German Nationalist and National Socialist parties, with 22 seats in the old Chamber, were absorbed by the Sudeten German party.

While the Sudeten German leaders professed their attachment to democratic government and their loyalty to the republic—a position they were obliged to take in order to prevent their party from being declared illegal—their organization was modeled on the Nazi movement in Germany. It made use of the same slogans and was run on the leadership principle. Charges that the party was inspired and financed from Berlin were emphatically denied by Henlein and his associates, but it was obvious that the emergence of such a strong German party would have far-reaching repercussions on future political developments. Its first result was to weaken the German parties of

the government coalition so seriously that the Malypetr Ministry resigned. Although Henlein sought representation for his party in the government, it was excluded in the new coalition government formed June 3, 1935, by Premier Malypetr. Representatives of the German Social Democrats and Agrarians again received cabinet posts. The principal change was the inclusion in the cabinet of the Middle Class (Traders) party, thus giving the government a safe majority, with 166 seats in the Chamber and 82 in the Senate.

In a declaration of policy before the new Chamber, a spokesman for the Sudeten Germans warned that the German people in Czechoslovakia would not accept a secondary rôle and that the party would continue to demand representation in the government and equal rights for Germans. He said, however, that the German minority recognized itself as a part of the nation and that his party would attempt to collaborate with the other groups in Parliament. Following the death of Bohumír Bradáč, the Czech Agrarian Speaker of the Chamber of Deputies, Premier Malypetr resigned on November 5 and the following day was elected Speaker of the Chamber. The Sudeten Germans demonstrated their coöperative attitude by voting in support of Malypetr's candidacy. The latter was succeeded as Premier by Dr. Milan Hodža, leader of the Czech Agrarian party. Dr. Hodža announced that there would be no change in the government's domestic or foreign policy. The ministry's domestic programme, announced earlier in the year, called for further aid to agriculture, reorganization of the tax system, a work relief programme for the unemployed, rehabilitation of the coal industry, and the introduction of the 40-hour week.

The influx of numerous refugees from dictator-ridden neighboring lands presented the government with another serious problem. Refugees were given sanctuary on condition that they renounced political activity and refrained from entering the already badly depressed labor market. However as many exiles were destitute and proved a burden to the country, the government in 1935 issued regulations restricting entrances and imposing a heavy tax upon well-to-do refugees. The Land Board, established in 1919 to carry out the redistribution of large estates, was dissolved on May 1, 1935, having terminated its work. The board had supervised the distribution among landless peasants, the former owners, and the state itself of some 10,000,000 acres, or 28.6 per cent of the total area of the country, previously held in 1913 estates.

President Masaryk Resigns. The oft-rumored resignation of Czechoslovakia's venerable President, Dr. Thomas G. Masaryk, who founded the republic and presided over its destinies since its birth in 1918, occurred on Dec. 14, 1935. He had delayed his retirement, necessitated by advancing years and ill health, pending the successful conclusion of negotiations among the political parties for the selection of Dr. Eduard Beneš as President Masaryk's successor. Dr. Beneš, the former student, protégé, and right-hand man of Dr. Masaryk, had been Foreign Minister for 17 successive years. He had established a reputation as one of the leading statesmen and probably the most experienced Foreign Minister in Europe. His election by a joint session of Parliament took place on December 18, with the support of the government coalition, the German Clericals, the Slovak People's party, the Communists, and part of the Hungarian minority party.

Foreign Relations. In the field of foreign af-

fairs, the principal developments of the year were the continuance and further development of strained relations with Germany and Poland, accompanied by a closer rapprochement with the Soviet Union. Czech fears of Germany were further aroused by unofficial reports that Hitler during his conferences with the British Foreign Secretary in Berlin in March had demanded the cession to the Reich of Czechoslovak territory occupied in part by the German minority of some 3,500,000 persons. Late in April the kidnaping by the Nazis of Josef Lampersberger, a German émigré, who was seized on Czechoslovak soil and carried across the border, proved a further cause of mutual irritation.

Polish-Czechoslovak friction, reawakened in 1934 as a result of the revival of Polish claims to Teschen and part of Slovakia, increased steadily during 1935. On October 18 the Czechoslovak Government expelled the Polish consul at Moravská Ostrava following his repeated criticisms of the treatment of the Polish minority in Teschen. Poland retaliated by expelling two Czechoslovak consuls. On October 28 10,000 Czechoslovaks staged a demonstration near the Polish border in Teschen as a warning of their determination to defend the territory to the last. Subsequently Czech officials in Teschen took severe measures to curb the violent acts and hostile demonstrations of the Poles in that district.

While not neglecting to strengthen their military forces, the Czechoslovaks tightened their newly developed bonds with Soviet Russia through the pact of mutual assistance signed on May 16, 1935. In June Foreign Minister Beneš visited Moscow to discuss mutual problems and in the same month his government announced that it would extend a credit of 250,000,000 crowns to the Soviet Government for the purchase of Czechoslovak products. A commercial treaty with the Soviet Union was signed March 25. On the same date an important clearing agreement was signed with Italy and on April 2 a provisional commercial agreement was concluded with the United States. See *LITTLE ENTENTE; POLAND under History*.

DAHOMÉY. See *FRENCH WEST AFRICA*.

DAIRYING. The outstanding feature of the dairy industry during 1935 was the unusually light production of dairy products, and especially butter during the first half of the year. Favorable conditions for the production of feed and pastures in the summer months permitted heavier feeding and increased milk production, notwithstanding a reduced number of milk cows. The drought of 1934 caused an acute feed shortage which made necessary reduction in the number of milk cows to about 25,100,000 head on Jan. 1, 1935. On that date milk production per cow was the lowest on record, being 5 per cent less than the low production of January, 1934. An intensive tuberculosis eradication campaign and disposition of cattle reacting to the Bang's disease, with \$30,000,000 of Federal funds supplemented by some State funds, had an important influence in reducing numbers of all classes of cattle.

Butter supplies were so low at the end of 1934 that considerable quantities of butter were imported during the first half of 1935. Notwithstanding a reduced domestic consumption and increased substitution of other fats, butter prices rose during the first few months of the year. Increased quantities of butter were imported, even over the 14 cent tariff. When crops and pastures for 1935 became available, the situation changed. Feeding was increased, and milk production per cow rose so that on August 1 and September 1 it was 10.6 and 8.0 per cent,

respectively, higher than on the corresponding dates of 1934. Notwithstanding the reduced numbers of milk cows, total milk production for the year 1935 was estimated at slightly less than for 1934.

Unusually heavy production of the principal manufactured dairy products was also reported during July, August, and September. As the consumption did not improve sufficiently, storage stocks were abundant in the fall. At that time prices of dairy products were low in relation to other farm products, and consequently feed supplies could be more profitably used for other classes of livestock.

A peculiarity of the production of manufactured dairy products was the changes in utilization. For example, in September production of butter was 2 per cent less than it was a year earlier, evaporated milk was down 6 per cent, but cheese production was 20 per cent larger than in September, 1934, and 40 per cent larger than the five-year average for that month. The production of condensed milk for December, 1935, was 43.4 per cent higher than in the corresponding month of 1934.

During the year 1935 creamery butter and cheese production totaled 1,634,000,000 lb. and 597,000,000 lb., respectively, a decrease of 3.6 and an increase of 3 per cent as compared with 1934. Condensed and evaporated milk production increased 9.7 and 9.1 per cent to 248,000,000 lb. and 1,868,000,000 lb., respectively.

Reference was made to the low consumption of butter which, during 1935 was 5.5 per cent less than in 1934. However, cheese consumption increased 5.2 per cent. For the apparent consumption of creamery butter, cheese, and condensed and evaporated milk, there was an estimated reduction of 2.6 per cent on a milk equivalent basis.

Encouragement for dairy interests was furnished by the increased movement of manufactured dairy products into channels of consumption in the fall. During September there was a reduction of 8,000,000 lb. in the storage stocks of butter, whereas in 1934 there was an increase of 5,000,000 lb. in the storage stocks of butter during that month. The decrease during October was twice as great in 1935 as in 1934. The total stocks of butter in storage on Dec. 1, 1935, were 72,000,000 lb. as compared with 81,000,000 lb. on the same date of 1934; and an average of 177,000,000 in the five years, 1930-34.

Cold storage holdings of American cheese on Oct. 1, 1935, were 102,633,000 lb., which were 6,000,000 lb. less than in 1934, but 15,000,000 lb. larger than the five-year average for 1930-34. Manufacturers' stocks of evaporated milk were high in the fall as a result of the reduced consumption. The total of 358,780,000 lb. in manufacturers' hands on September 1 was the largest ever reported for any month.

Some assistance in the marketing of dairy products was rendered through purchases by the Agricultural Adjustment Administration, during the early part of the year 1935, of several million pounds of butter, cheese, evaporated milk, and dry skim milk, which were distributed through relief agencies.

International Conditions. U.S.A. butter imports were not as large for any year since 1923 as they were during the first six months of 1935 when over 21,000,000 lb. were imported. On account of the tariff barrier, butter imports of the United States ordinarily amount to only about 1,000,000 lb. The imports increased progressively from December, 1934, until they reached 8,860,000 lb. during the month of April. As feeds and

pastures became available, domestic production increased and prices receded so that imports were no longer profitable. Butter imports during the first four months of the year were chiefly from New Zealand, but they continued from the Netherlands and Baltic States to a lesser extent during May and June. Butter production in Australia and New Zealand was heavy, although unfavorable weather conditions in New Zealand reduced the amount of butter graded in the first part of the Southern Hemisphere spring season.

Butter imports of the United Kingdom, amounting to 919,000,000 lb. were 22,000,000 lb. less during the first ten months of 1935 as compared with 1934; whereas, German imports amounting to 159,000,000 lb. during the 12 months' period of 1935, were 22,000,000 lb. greater than in the corresponding period of the previous year. The increased amount was due largely to increases in butter imports from the Continent, including Denmark, Russia, Sweden, Estonia, Finland, Austria, and France, although Denmark exported 10 per cent less butter during the first ten months of the year than in the corresponding period of 1934. Exports to Germany were increased 38 per cent.

Imports of cheese by the United States for the first time in several years were approximately equal to the preceding year. The imports during the 12 months of 1935 totaled 48,932,643 lb. Shifts in the source of the cheese imports were apparent. Swiss cheese imports were only a little more than 25 per cent of the imports of 1927, and Italian cheese imports declined materially from 1926 to 1933. Increases were shown in 1934 and 1935 as compared with the preceding year. Danish cheese exports to the United States have increased for several years, although the total cheese exports of Denmark in 1935 were less than in 1934.

Research. Knowledge of the factors underlying milk secretion have long been baffling. However, studies at the Missouri and New York Cornell Agricultural Experiment Stations showed that development of the mammary gland, as occurs near the end of gestation, could be induced in virgin heifers and rabbits by injections of a hormone from the follicle about the developing ovum. The mammary glands of such animals could be brought into active milk secretion within three days by the administration of galactin—a hormone of the pituitary gland.

Greater utilization of pastures for milk production results in cheaper feed, as labor costs in harvesting are reduced to a minimum. With the tendency to stabilize production more in accord with demand and the more keen competition arising in dairy production, there was increased interest in the use of pasture, forage, and roughages. The New Jersey Agricultural Experiment Station showed that more feed could be obtained from pasture over a longer period by dividing the pastures so that grazing could be rotated with fertilization at regular intervals. Dried young grass was found by the Vermont Agricultural Experiment Station to have a very high nutritive value for dairy cows.

Because of the large amounts of calcium in the milk, the importance of mineral supplements in the dairy ration is generally recognized. However, roughages and pasture vary greatly in their mineral content, depending largely on the minerals present in the soil on which the plants are grown. For example, the Pennsylvania Agricultural Experiment Station found that where adequate amounts of roughage were fed, the milking cows did not need minerals other than common salt in the ration. When the roughage consisted of inferior quality

mixed hay, the Massachusetts Agricultural Experiment Station found that additional sources of phosphorus were needed.

Because of the importance of vitamin D—the rickett-preventing vitamin—in infant nutrition, attempts were made to increase the amount of this vitamin in the milk. The Ohio Agricultural Experiment Station found that additional amounts of vitamin D could be obtained in the milk by feeding irradiated yeast to the cow or by irradiating the milk. It was also found that the addition of vitamin D concentrate to the milk permitted the production of a product more uniformly standardized for its vitamin D content. However, such milk was subject to the unfavorable psychological reaction of the consumer, and is in conflict with regulations against adding substances to milk.

Undesirable odors and off-flavors are a serious handicap in the marketing of fluid milk. The California Agricultural Experiment Station found that various feeds such as alfalfa hay, clover hay, musty hay, or corn silage if fed in too large amounts shortly before milking, imparted undesirable odors and flavors to the milk. On the other hand, when wheat bran was fed one hour before milking, a pleasing flavor was imparted to the milk. It was also found that there were characteristic undesirable flavors in the milk from some cows. In the study of the product, exposure to sunlight was found to impart an oxidized or tallowy flavor to milk.

The United States normally imports considerable quantities of foreign types of cheeses. Attempts were made to produce such cheese in the United States. Roquefort has been successfully manufactured from cow's milk under rather definite conditions in studies by the U.S. Department of Agriculture. The Minnesota and Iowa Agricultural Experiment Stations also produced a satisfactory roquefort cheese. Caves in Sandstone Bluffs, along the Mississippi River in Minnesota, were found by the former station to be particularly well suited for ripening the cheese.

Fire destroyed the experiment station dairy barn at Clemson College, South Carolina, on February 6, but the station herd was fortunately saved. Most of the experiment station dairy plant at Fallon, Nevada, was burned on Nov. 10, 1934. A new, enlarged barn was erected in its stead.

Changes in Personnel. Prof. F. W. Atkeson, head of the dairy husbandry department at the University of Idaho, was appointed head of the dairy department of Kansas State Agricultural College, effective April 1, to succeed J. B. Fitch. Prof. D. R. Theophilus succeeded Prof. Atkeson as head of the dairy department at the University of Idaho. Prof. T. R. Warren, of the same institution, resigned to become field representative of the American Jersey Cattle Club in the Western States.

Bibliography. The following is a list of recent publications of general interest in dairying: *Proceedings of the 29th Annual Meeting of the American Dairy Science Association*, (Jour. Dairy Science, 18 [1935], No. 7, pp. 429-82); *Breeding Profitable Dairy Cattle; a New Source of National Wealth*, by E. P. Prentice, (Boston, Houghton Mifflin, 1935); *Le contrôle des vaches laitières dans le monde* (Internat. Inst. of Agr. Bur. Agr. Sci., Rome, 1935); *The Effects on Calcium and Phosphorus Metabolism in Dairy Cows of Feeding Low-Calcium Rations for Long Periods*, by E. B. Meigs, W. A. Turner, E. A. Kane, and L. A. Shinn, (Jour. Agr. Res., 51 [1935], No. 1, pp. 1-26); *Fundamentals of Dairy Science*, by associates of L. A.

Rogers in the research laboratories of the Bur. of Dairy Indus., U.S. Dept. Agr. (New York, 2d ed. Reinhold Pub. Corp., 1935 [Amer. Chem. Soc. Monograph Ser. No. 41]); *Practical Dairy Tests and Fundamentals of Dairying*, by A. D. Burke, (Milwaukee, Olsen, 1935); *The Milk Problem*, by R. M. Love, (London, F. R. Britton, 1934); *Flavors of Milk and Their Control*, by C. L. Roadhouse and J. L. Henderson, (Calif. Bul. 595, 1935); *Packaging, Curing, and Merchandising American Cheddar Cheese in Cans*, by H. L. Wilson, (U.S. Dept. Agr. Circ. 352 [1935], pp. 15); *The Theory and Practice of Ice Cream Making*, by H. H. Sommer, (Madison, Wis.: Author, 1935, 2d ed., pp. 639); *Condensed Milk and Milk Powder*, by O. F. Hunziker, (La Grange, Ill.: Author, 1935, 5th ed.).

DAKAR. See FRENCH WEST AFRICA.

DAMS. Now that work in the greatest of all dams, the giant of Boulder Canyon, is rapidly drawing to a close, the remarkable accomplishment of American engineering and engineering-contracting skill stands out in clear relief.

Bonneville Dam. This concrete spillway dam, 1250 ft. long and 170 ft high, is not in quite as gigantic a scale as that farther up the Columbia at Grand Coulee, but it does present a most difficult construction problem. In fact, the major difficulty in building this work probably centres on the cofferdam construction needed to secure the foundations. The cofferdams are being placed in water 30 to 50 ft deep and in currents up to 7 miles per hour on a rough and irregular river bed—a most difficult undertaking. The first half of the cofferdam was placed in the winter of 1934-35, the period of low flow. Some 200,000 cu. yd. of excavation was completed before summer floods required the removal of all equipment and the filling of the 8-acre area. In the fall, the cofferdam was again pumped out, excavation was completed, and a concrete foundation placed. A similar process was to be followed for the north half of the channel.

Boulder Dam. This dam, one of the modern wonders of the world, will be completed two years ahead of schedule. Water was first stored back of the dam in February, 1935, and the main structure is practically complete. Indeed, the principal remaining work is that in connection with the penstocks and power houses. Late in December, the last section of the huge penstocks was lowered into place and it was expected that power production would begin early in 1936.

Conchas Dam. The U.S. Army Engineers began work on a 6½ million cubic yard earth fill dam on the Conchas River near Tucumcari, N. M.

El Vado Dam, N. M. Rock fill dams using steel diaphragms or decks have been constructed in the past, but, in such recent great works as the Dix River Dam in Kentucky, and the Salt Springs work of the Pacific Gas & Electric Co. in California, a reinforced concrete steel deck has been adopted. Now, with the construction of the rock fill El Vado Dam in New Mexico, a rock fill dam 175 ft. high, there has been a return to the older steel diaphragm type of construction. In fact not only is steel used as a metal fan plate for the dam but also for a wave parapet and as lining for the spillway.

Fort Peck Dam. One hundred million cubic yards of earth will be required for this tremendous earth mountain which is being built as a relief measure high up on the Missouri in Montana. The only shipyard ever built in Montana turned out four huge suction dredges with 7 ft. diameter cutters, which are being used to secure the fill needed

for this work. The dam will be 250 ft. high and is located at a point where the river is $1\frac{1}{2}$ miles wide, thus requiring a volume of fill many times larger than any similar work ever undertaken by man. A cut-off of steel sheet piling has been driven from 140 to 190 ft. below the valley on the centre line of the dam and the dredges are now pumping in the required fill. Everything about the structure is on a similar gigantic scale. The spillway is to be 2 miles long and requires 13 million cubic yards of excavation. Four huge diversion tunnels have been driven, totaling over $4\frac{1}{4}$ miles in length.

The Fort Peck Dam will store $19\frac{1}{2}$ million acre-ft. of water which will be released to maintain navigable depths in the river between St. Louis, Mo., and Sioux City, Ia., during periods of low flow. It will also serve for flood control and, perhaps, its waters may some day be used for irrigation.

Grand Coulee. While the economic value of the two great works on the Columbia River—the Grand Coulee and the Bonneville Dams—now being undertaken by the Federal Government, may be seriously questioned, the purely technical features of their design and construction are worthy of special study.

When we reflect that the principal object of these works was to aid unemployment and revive the construction industry in this area, it is upsetting to discover that the construction plant at Grand Coulee is hailed as the last word and a high water mark in the mechanization of concrete construction. A huge concrete mixing plant has been constructed on concrete stilts, 240 ft. high, against the steep western wall of the valley. This plant has a designed capacity of 320 cu. yds. of concrete per hour and a similar plant is projected for the other end of the dam. The first of the 4 million cu yd of concrete required for this dam was placed on December 6. The work is being done by contract and under the direction of the U.S. Bureau of Reclamation.

Roller-Gate Dams. In those conditions which require that a practically uninterrupted channel be provided during flood flows, the only kind of dam available is one of the several gate-types. The roller-gate has the advantage of providing great spans—up to 100 ft.—between supports, and ease and reliability of operation. Several such dams have been built in the United States—one at Belows Falls, Vt., the Grand Valley Dam on the Colorado, and several others in connection with river canalization work. In the new work of the U.S. Engineers on the upper Mississippi, this type, suitable for a diversion dam or for moderate head constructions only—say up to 20-odd ft. max.—has been adopted for such notable installations as that at Alton, Ill.

San Gabriel Dams. THE The checkered history of the various attempts of the Los Angeles County Flood Control District, organized in 1924, to build retention reservoirs in the San Gabriel Canyon has been noted in previous YEAR BOOKS. Originally \$25,000,000 was allocated from the total bond issues to construct a concrete dam, of then unprecedented height, at the Forks site in the Canyon. After large sums had been spent in excavation at this site in 1929, the safety of the proposed structure was questioned, the plans disapproved, and the contract canceled. Surveys were then made at No. 1 dam site for a rock-fill dam 375 ft. high. Litigation delayed the work. All bids submitted in the first two different calls for bids were rejected. Finally, however, late in 1932 a contract was awarded to the West Slope Construc-

tion Co. Difficulties in securing suitable rock—in the earlier stages of the work little more than $\frac{1}{10}$ of that excavated in the quarry actually went into the work—the resignation of the chief engineer, and the advent of new consultants, led to two reports late in 1934. Work was suspended but new plans were approved and construction resumed last August. With flatter slopes and provision for jetteting the fill in some five zones of the structure, the work is again under way.

Tennessee Valley Authority Dams. THE Probably one of the most interesting features of the Norris Dam of the TVA project is the extraordinary effort which has been made to secure watertightness, in the dolomite which underlies the structure, through grouting. The grouting programme, made necessary by the fact that hidden channels in this rock threatened to provide passages for underflow, was the most elaborate ever attempted. Huge borings, 36 in. in diameter and thus large enough to permit a man to be lowered into the hole, made a direct examination of the foundation conditions possible. The effectiveness of the pressure grouting operations was later carefully checked by $5\frac{1}{2}$ in. core drillings.

Below this structure, and only $15\frac{1}{2}$ miles above the Wilson (or Muscle Shoals) Dam, completed during the World War, is the Wheeler Dam. This interesting structure, 6400 ft. long, is now in its final year of construction.

A third dam, at Pickwick Landing 50-odd miles below the famous Wilson Dam at Muscle Shoals, has also been started by the TVA. Although ultimately intended as a power site the Pickwick Dam is to be built at first only for navigation. It will provide a minimum of 9 ft. for the least navigable stretch of the lower river. An ogee concrete spillway, 43 ft. high and 1156 ft. long, is to be controlled by means of gates each 40 by 40 ft. in size. When Wheeler Dam, above Muscle Shoals, is completed and a limited amount of dredging is done below Pickwick, a 7 ft. channel will be available for 358 miles of the river up from the Ohio under low flow conditions.

FOREIGN DAMS

Chambon Dam, France. This gravity type water-power structure, under construction on the Romanche River in southeastern France, will surpass the Sautet Dam in height. Rising 790 ft. above the streambed, the maximum section of this dam will be 450 ft. high. The foundation is principally gneiss but contains two areas of dolomitic limestone. Extraordinary provisions were made for grouting this material. Some two miles of grout holes were used in the effort to seal the foundations and the amount of grout used exceeded all expectations. One of the lower holes in the gneiss absorbed nearly 46 tons of cement.

Sautet Dam, France. This is the highest dam in Europe and apparently surpassed in height only by Boulder Dam. This constant-angle arch structure rises 414 ft. above the lowest point in a narrow valley of the Drac River, in the French Alps about 45 miles from Grenoble. Less than 50 ft. wide at the narrowest point, the Sautet Gorge is 600 ft. deep and furnishes an ideal site for an arch dam. The valley walls, however, are a limestone formation, recognized as a somewhat treacherous material for dams, and special precautions, including elaborate grouting and a backing of lean concrete, to buttress the canyon walls, were taken to prevent seepage. The unusual arrangement of the power house, partly in a gallery cut in the rock and partly in a reinforced concrete

structure spanning the gorge, makes this a unique and most interesting work.

Molare Dam, Italy. This dam, located on the Orba River in Italy, a gravity type water-power structure 150 ft. high, failed on August 12. Below the site, about 30 miles from Genoa, were several towns and the flood waters did considerable damage.

DANA, EDWARD SALISBURY. An American geologist, died June 16, 1935, at New Haven, Conn., where he was born, Nov. 16, 1849. He was graduated from Yale University in 1870, and subsequently studied at Sheffield Scientific School, particularly mineralogy and chemistry, and at Heidelberg and Vienna. In 1874 he joined the faculty of Yale University as a tutor and five years later became assistant professor of natural philosophy. In 1890 he was appointed professor of physics, becoming professor emeritus in 1917. From 1870 to 1922 he was curator of the mineralogical collection at the University, and from 1885 to 1929 was a trustee of Peabody Museum, Yale University.

He and his father, James Dwight Dana, were considered the foremost American pioneer research students and world authorities in the field of geology. On the death of the elder Dana, his son continued the father's work. In 1875 he took over the editorship of *The American Journal of Science*, which had been founded and edited by his great grandfather, Benjamin Silliman, in 1818. In 1926, he turned this Journal over to Yale University, and there it has become an integral part of the publications of the Yale Press.

Professor Dana was a member of many scientific societies, and in 1934 was made an honorary life member of the American Museum of Natural History and of the New York Mineralogical Club. In 1925, the Mineralogical Society of America elected him honorary president for life. At his death, the Yale University Corporation passed a resolution, which read in part: "Foremost American geologist of his time, he brought to himself and to the University widespread recognition in the world of science."

Dr. Dana supplied the 2d and 3d appendices to the 5th edition of his father's great work, Dana's *System of Mineralogy* (1875-82), and in 1892 completed his revision of the 6th edition of this same work, which had taken him ten years. His own publications were: *Text Book of Mineralogy* (1877, new ed., 1898); *Text Book of Elementary Mechanics* (1881); *Minerals and How to Study Them* (1895), and many papers on minerals to technical periodicals.

DANISH LITERATURE. See SCANDINAVIAN LITERATURE.

DANZIG, dan'sik, FREE CITY OF. A Baltic port at the mouth of the Vistula River, which, with the surrounding territory, was constituted a Free City by articles 100 and 102 of the Treaty of Versailles. Area, 754 square miles; population on Jan. 1, 1934, 410,000. Births in 1933 numbered 7719; deaths, 4671; marriages, 3769. In 1934 there were 53,548 pupils in elementary schools, 4198 in middle schools, 5319 in high schools, and 1548 in the Technical University. The German language is spoken.

Commerce and Shipping. Once the main outlet for the trade of Poland and a large sector of north central Europe, Danzig has been forced to share this business with the new Polish port of Gdynia. Sea-borne imports in 1934 were valued

at 219,240,000 gulden; exports, 98,400,000 gulden. In 1933 the chief exports through the port were: Grain, 397,030 tons; sawn timber, 725,859 tons; sugar, 5238 tons. The net tonnage of over-seas shipping entering the port with cargo and in ballast in 1934 was 3,175,000 (2,763,000 in 1933); tonnage cleared, 3,165,000 (2,734,000 in 1933). The merchant marine on July 1, 1935, consisted of 17 steamers of 17,309 gross tons and 24 motor ships of 248,653 gross tons.

Government. Danzig is under the protection of the League of Nations, which is represented by a High Commissioner. Under the Treaty of Versailles the Free City is included in the Polish customs administration and its foreign relations are controlled by Poland. The territory exercises a large measure of autonomy through a Diet of 72 members elected by universal secret suffrage. The Diet in turn elects the President, Vice President, and 10 Senators for an indefinite period. The Senate, which includes the President and Vice President, is the executive and administrative arm of the government. Its meetings are private. President in 1935, Arthur Greiser (National Socialist), elected Nov. 28, 1934. High Commissioner of the League of Nations, Sean Lester (appointed Oct. 26, 1933). High Commissioner of Poland, Dr. Casimir Papée.

History. The attempt of the National Socialist majority in Danzig to impose a totalitarian régime upon the Free City encountered repeated snags in 1935, but kept the territory in turmoil throughout the year. While the Nazis held 38 out of 72 seats in the Danzig Diet, they lacked the two-thirds majority needed to amend the Constitution in accordance with their plans. Accordingly the Nazi majority voted to dissolve the Diet on Feb. 21, 1935, although the members still had two years to serve. New elections were called for April 7. The Nazis confidently predicted that the Danzig Germans, comprising 95 per cent of the total inhabitants, would demonstrate their overwhelming attachment to National Socialist principles and give the Nazis a mandate to establish a totalitarian state. This step, it was indicated, would be the preliminary move towards the reincorporation of Danzig in the German Reich, even though this would involve another breach of the Versailles Treaty.

In the electoral campaign the Nazis, with strong support from Germany, left nothing to chance. They carried out the familiar high-pressure electioneering procedure which had proved so successful in Germany and in the Saar. Party leaders from Germany, including Goering, Hess, Goebbels, and Streicher, were imported to address huge and colorful mass meetings. Danzig was plastered with Nazi posters and swastika banners, while the opposition elements were largely prevented from campaigning. Nevertheless the Nazi failed by five seats to win the two-thirds majority required to change the Constitution. Their popular vote of 30,000 comprised 59 per cent of the electorate, as compared with 51 per cent voting National Socialist in May, 1933. The Nazis elected in all 43 deputies as against 29 returned by the opposition Socialists, Catholics, and Poles. The election thus conclusively demonstrated that a large number of the German Socialists and Catholics in Danzig were not prepared to accept Nazi principles. The high tension generated during the campaign continued for some time, especially between the Nazis and the Poles. Anti-German demonstrations in the Polish Corridor followed the repressive measures

adopted by the Nazis towards the Polish minority in Danzig.

Although unable to amend the Constitution, or to dispense with it in the face of the League of Nations and of Poland, the Nazi government in Danzig proceeded to carry out its totalitarian principles as far as possible. Opposition newspapers were censored or suppressed. A force of about 1000 gendarmes was organized, in addition to the police, but this was suppressed on October 21 after Poland had registered a vigorous protest. On September 5 the Senate introduced a series of penal ordinances which practically duplicated those in force in Germany and which gave the government arbitrary powers of arrest and imprisonment against any one charged with being "a menace to the public order." The minority groups protested to the League, contending that these laws violated the Free City's Constitution, and their contention was upheld in an advisory opinion rendered by the World Court at The Hague on December 4. The League Council in September appointed a committee, with Anthony Eden of Great Britain as rapporteur, to investigate claims of the Danzig minorities that the Nazi government had infringed their rights in other respects. Action on this issue was still pending at the close of 1935.

Meanwhile Danzig had become involved in serious financial difficulties, leading to complications with Poland which threatened to disturb friendly Polish-German relations. Since its assumption of control in May, 1933, the Danzig Nazi government had been subsidized to the extent of nearly \$600,000 monthly by the Reich. After the election of April 7, however, the subsidies ceased, due partly to the growing financial stringency in Germany. Germany also defaulted on debts aggregating some \$2,500,000 due to Danzig for agricultural produce exported to the Reich. These developments led to a serious budget shortage in Danzig, where the German subsidies had been spent in a great public works programme. The gold coverage for the Danzig gulden fell to 35 per cent—5 per cent under the legal minimum—and on May 2 the Danzig authorities were forced to devalue the gulden by 42.37 per cent.

Depreciation of the currency in Danzig started a flight from the gulden which led the authorities to proclaim a banking moratorium on June 4 and to impose a rigid foreign exchange control system on June 12, together with strict measures of governmental economy. It was hoped in this way to prevent the Polish zloty from replacing the gulden as the prevailing medium of exchange. The Poles, asserting that the Danzig exchange control measures violated Polish-Danzig commercial agreements, took retaliatory measures. Polish railways refused to accept payment in gulden for shipments to Poland and on July 18 the Warsaw government issued a decree which in effect prohibited all imports into Poland via Danzig, thus diverting practically all the city's transit trade to the rival Polish port of Gdynia. Danzig retaliated on August 1 by abolishing duties on most of its imports from Germany, thus in effect terminating the Polish-Danzig customs union and uniting Danzig economically to the Reich. These developments were accompanied by mounting hostility on both sides and border guards were reinforced. The Reich Government apparently intervened to end the tension and late in September the Danzig and Polish authorities reached a mutually satisfactory settlement of the currency issue. Poland withdrew

its order forbidding the collection by Danzig of customs duties on goods shipped to Poland and Danzig ended its free market for German imports. See GERMANY and POLAND under *History*.

DARTMOUTH COLLEGE. A nonsectarian institution for the higher education of men in Hanover, N. H., founded in 1769. The 1935 autumn session had an enrollment of 2460 students. There were 272 members on the faculty. The endowment amounted to \$17,209,301, while the income for the year was \$457,437. The Fisher Ames Baker Memorial Library contained 402,279 volumes. President, Ernest Martin Hopkins, LL.D.

DAVIS, KATHARINE BEMENT. An American sociologist, died at Pacific Grove, Calif., Dec. 10, 1935. Born in Buffalo, N. Y., Jan. 15, 1860, she graduated from Vassar College in 1892, when she took charge of the College Settlement House in Philadelphia. Here she served for five years when she became a fellow in political economy at the University of Chicago. She again held this fellowship in 1899-1900, and received the degree of Ph.D. The previous year she held the fellowship of the New England Women's Educational Association at Berlin and Vienna.

In 1901, Miss Davis was appointed superintendent of the State Reformatory for Women at Bedford, N. Y., which was then newly opened with one inmate, and under her forceful and capable administration became famous among penologists. It was her belief that the punishment should fit the criminal rather than the crime, and she inaugurated the plan of giving the women congenial occupation. In 1911, when the Bureau of Social Hygiene was founded, she served on the original Committee, and it was largely through her efforts that advanced methods for the reclamation of the women committed to the care of the State were introduced at Bedford. On Jan. 1, 1914, Mayor John Purroy Mitchel, of New York City, selected her as Commissioner of Correction for that City, the first woman to hold the position. Her administration of that office showed the same firmness displayed at Bedford. In the following year she became Chairman of the Parole Commission, but relinquished that office in 1917 to become General Secretary of the Bureau of Social Hygiene in 1918, from which she retired in 1928. In that same year she served also as director of the section on women's work of the Division of Social Hygiene of the Commission on Training Camp Activities. At the outbreak of the World War, she became chairman of the Committee of Mercy, which raised almost \$3,000,000 for the relief of women and children. At the entrance of the United States into the War, the fund was taken over by the Red Cross.

Further proof of Dr. Davis' capabilities was given in 1908, when she was visiting at Messina, Italy, at the time of the earthquake. She immediately took charge of relief service, and for three months labored long and strenuously, and for her activities was decorated by the Italian Government and the American and Italian Red Cross Societies.

In 1915, she lectured at Columbia University on good government, and she was the author of *Factors of the Sex Life of 2200 Women*, a study sponsored by the Bureau of Social Hygiene.

DEBTS. See UNITED STATES under *Administration*; PUBLIC FINANCE; REPARATIONS AND WAR DEBTS.

DE KAY, CHARLES. An American poet and critic, died in New York City, May 23, 1935. Born in Washington, July 25, 1848. After receiving part

of his early education abroad, he was graduated from Yale University in 1868. Following his graduation he went to Paris where he remained for several years. Returning to America, he entered upon an artistic and literary career, becoming in 1876, literary and art editor of the *New York Times*. He held this position until 1894, when President Cleveland appointed him consul-general at Berlin. For three years he served in that city returning to the United States in 1897, when he again turned to literature as a career. In 1907 he became art editor of the *New York Evening Post*, and from 1915 to 1917 he was an associate editor of *Art World*. Until 1928, he was a frequent contributor to the *New York Times Book Review*.

Mr. De Kay's first published volume was *The Bohemians* issued in 1880. During the three years that followed he published *Hesperus and Other Poems* (1880); *Vision of Nimrod* (1881); *Vision of Esther* (dramatic poems) (1882); *Love Poems of Louis Barnaval* (1883). This last-named book attracted considerable attention and the reviewer in the *Nation* said, "This remarkable volume takes a stride . . . far in advance of anything yet done by Mr. De Kay." Edmund C. Stedman, in his *Poets of America* said that *Poems of Barnaval* showed "his impassioned and more subjective moods and his resources for a prodigal display of varied, uneven, but strongly lyrical work."

Always an ardent fencer, in 1882 he founded the Fencers' Club, and in 1895 organized the Berliner Fecht Klub, also devoted to fencing. Also he was instrumental in the establishment of the Authors' Club in 1881; the National Sculpture Society in 1882, and the National Arts Club in 1898.

In addition to Mr. De Kay's other contributions to literature already cited may be included: *Life and Works of Barye, Sculptor* (1889); *Bird Gods* (Studies of myths and religions in ancient Europe) (1898); *Life and Works of Louis C. Tiffany*. He also contributed "Essays on Ireland" to the *Century Magazine* and "Wonders of the Alphabet" to *St. Nicholas* and issued translations from the French of Daudet and Rolland, and *Familiar Letters of Heinrich Heine* (1890), translated from the German.

DELAWARE. Population. On Apr. 1, 1930 (Fifteenth Census), 238,380; July 1, 1934, by latest Federal estimate, 242,000; 1920 (Census), 223,003. Wilmington had (1930) 106,597 inhabitants; Dover, the capital, 4800.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu.	Value
Corn	1935	144,000	4,464,000	\$2,678,000
	1934	141,000	4,864,000	3,891,000
Hay (tame)	1935	74,000	125,000 ^a	1,462,000
	1934	71,000	125,000 ^a	1,600,000
Wheat	1935	85,000	1,658,000	1,310,000
	1934	81,000	1,539,000	1,400,000
Sweet potatoes . . .	1935	7,000	840,000	504,000
	1934	6,000	810,000	624,000

^a Tons.

Education. The number of the State's inhabitants of school age approximated 53,000. The enrollments of pupils in the public schools in 1935 totaled 45,278. Of these, 27,926 were in common schools or elementary grades; in high schools, 17,352. The expenditures of the academic year 1934-35 for public-school education totaled \$6,208,577, of which \$3,717,578 was current expenditure, \$2,301,382 capital outlay, and \$189,617 for service of debt. Salaries of teachers averaged, for the year,

\$1381. Classes in adult education were continued, and the enrollment in these classes rose to 6422. A general reduction in teachers' salaries, at a scale of rates, from 5 per cent on the first \$200 above \$1000, up to 20 per cent on all excess over \$5000, was in effect in the academic year 1934-35.

Charities and Corrections. The central activity of the State, with regard to institutions, organizations, and agencies of eleemosynary or correctional character supported or aided by public funds, was the State Board of Charities. It was composed of five ordinary members and the Governor *ex officio*; three members were chosen from the respective counties and two at large. The Board was required to visit institutions, organizations, and agencies once a year. It rendered services in investigating paroles and the cases of the nonresident poor, licensed the boarding homes and agencies of placement for dependent children, investigated, when required, the management of any benevolent or correctional institution, investigated cases of need among minors, cared for such minors as were committed to its care, and administered the sterilization law.

Legislation. The State's taxation of incomes was made to apply to all persons having net incomes of as much as \$100. This measure had for its reported purpose the putting of individuals under compulsion, through legal penalties, to make returns of income, in order that fraudulent applications for public aid to the needy unemployed might be detected.

Political and Other Events. Figures published by the FERA on March 1 indicated that Delaware had distinguished itself in 1934 by paying within a fraction of a per cent of one-half of the cost of public support granted to its destitute unemployed in 1934. Of the total of such grants, \$1,645,697, the Federal part came to 50.4 per cent; contributions of the State and a slightly greater total of contributions from local bodies made up the remainder. The year's cost of this aid in Delaware, coming to substantially less than \$8 per capita of the population, compared favorably with a corresponding figure of some \$12 for the entire nation.

Officers. The chief officers of the State, serving in 1935, were: Governor, C. D. Buck; Lieutenant-Governor, Roy F. Corley; Treasurer, Warren T. Moore; Auditor, J. Henry Hazel; Secretary of State, Walter Dent Smith; Attorney-General, Percy W. Green.

Judiciary. Chancellor, Josiah O. Wolcott; Chief Justice of the Supreme Court, Daniel W. Layton; Associate Judges, Richard S. Rodney, David J. Reinhardt, William W. Harrington, Charles S. Richards.

DELLENBAUGH, FREDERICK SAMUEL. American artist and author, died in New York City, Jan. 29, 1935. Born at McConnelsville, O., Sept. 13, 1853, he was educated in Buffalo, New York City, Munich, and Paris, and studied for a time with Carolus Duran and at the Académie Julian. He joined Major Powell's second expedition down the Colorado River in 1871 as artist and assistant topographer. In that capacity he helped draw the first map of the Grand Canyon region. In 1899 he was a member of the Harriman expedition to Alaska and Siberia, and later made voyages to Iceland, Spitsbergen and Norway. He went on an exploration trip to the West Indies and South America in 1906 and three years later became librarian of the American Geographical Society. He held this post until 1911. From 1925 he was

secretary of the John Burroughs Memorial Association.

One of the early members of the Explorers' Club, he served as its vice president from 1922 to 1928. A fellow of the American Ethnological Association, he was a member of the American Association for the Advancement of Science. The John Burroughs Memorial Association awarded him its medal for the best work relating to nature in 1932 for his *A Canyon Voyage*, originally published in 1908 and reprinted in 1926. Well-known for his pictures of Indian scenes, a collection of his paintings now hang in the Museum of the American Indian. Besides contributing to Sturgis's *Dictionary of Architecture*, to the second edition (1914-15) of the *NEW INTERNATIONAL ENCYCLOPEDIA*, he wrote: *The North Americans of Yesterday* (1900); *The Romance of the Colorado River* (1903, 3d ed., 1909); *Breaking the Wilderness* (1905); *Frémont and '49* (1913, 2d ed., 1914); *Life of Gen. George A. Custer* (1916).

DE MOLAY, ORDER OF. A nonsectarian secret organization for young men between the ages of 15 and 21, founded in 1919 by Frank S. Land in Kansas City, Mo., and named in honor of Jacques De Molay, the last military grand master of the Knights Templars. The members are pledged to the precepts of love of parents, reverence, patriotism, cleanness, courtesy, fidelity, and comradeship, and to the promotion of the public school system and good citizenship. The Order is governed by a Grand Council of Freemasons among which are included Gen. James G. Harbord, F. Trubee Davison, and Dr. Chas. H. Mayo, while the Chapters are sponsored by Masonic Bodies or groups of Masons. However, it is not a junior Masonic fraternity, and more than 60 per cent of its members are from non-Masonic families. In November, 1934, the active membership numbered approximately 160,000. The organization has an alumni of more than 800,000 men. The official organ is *International De Molay Cordon* (monthly). Frank S. Land, the founder, is Secretary General; Franklin D. Roosevelt is Honorary Grand Master; Jesse M. Whited, San Francisco, is Grand Master; Geo. H. Dern, Deputy Grand Master; and Maj. Gen. M. W. Ireland, Grand Senior Councilor. Dr. Stratton D. Brooks is Executive Director of the Secretary General's staff. International headquarters are at 201 East Armour Boulevard, Kansas City, Mo.

DENISON UNIVERSITY. A coeducational Christian college of liberal arts in Granville, O., founded in 1831. The enrollment for the autumn of 1935 was 836. The 1935 summer session had an enrollment of 125. The endowment was \$3,759,200 and the income for the year \$297,700. There were 81,000 volumes in the library. Ground was broken for the erection of a new library building. President, Avery Albert Shaw, A.M., D.D.

DENMARK. A kingdom of northwestern Europe, comprising the peninsula of Jutland, the two main islands Zealand and Funen, with about 200 smaller adjacent islands in the Baltic, the Faroe Islands, and Greenland. The King of Denmark is also King of Iceland (q.v.). Capital, Copenhagen (København). King in 1935, Christian X, who succeeded to the throne May 14, 1912.

Area and Population. Excluding outlying possessions, Denmark has an area of 16,576 square miles and a population estimated in 1934 at 3,656,000 (3,550,656 at 1930 census). Living births in 1934 numbered 65,120; deaths, 38,106; marriages, 34,758. Populations of the chief cities in 1930 were: Copenhagen, with suburbs, 771,168; Aarhus, 81,-

279; Odense, 56,759; Aalborg, 44,365. Lutheranism is the established religion.

Education. There is no illiteracy. The school attendance as of Jan. 1, 1933, was: Elementary, 501,054; secondary, 55,422; University of Copenhagen (1932-33), 6025; University of Aarhus (opened Sept. 11, 1933), about 120. There are also various technical and vocational institutions.

Production. Agriculture and dairying are the main occupations and farm products normally account for three-fourths of the value of all exports. In 1934 there were 5,572,000 acres of arable land, 1,334,000 acres of meadow and pasture, and 859,000 acres of forest. Crop yields in 1934 were: Wheat, 12,493,000 bu.; rye, 11,023,000 bu.; barley, 43,634,000 bu.; oats, 67,516,000 bu.; potatoes, 50,338,000 bu.; sugar beets, 1,050,000 metric tons; forage roots, 20,890,000 metric tons; hay, 1,900,000 metric tons. Beet sugar production (1934-35) was 91,000 metric tons. Livestock in 1934 included 3,113,000 cattle, 3,130,000 swine, and 525,000 horses. Animals slaughtered in 1934 numbered 860,000 cattle and calves, 65,000 sheep and goats, and 4,898,000 swine. Production of bacon was 780,000,000 lb.; butter, 403,000,000 lb.

Output of the leading industries in 1934 was: Pork and pork products, 653,825,000 lb.; shipbuilding, 62,312 gross tons launched; wheat flour, 1,645,000 bbl.; milk (condensed, powdered, etc.), 68,499,000 lb.; margarine, 158,176,000 lb.; cotton yarn, 16,826,000 lb.; cotton cloth and articles, 12,467,000 lb.; cement, 770,000 metric tons; paper and cardboard, 118,087,000 lb. The index of industrial production (Base: 1929 equals 100) was 105.0 for 1933, 117.0 for 1934, and 121.0 for 1935. There were 114,256 unemployed union workers at the end of 1934 (131,930 at end of 1933).

Foreign Trade. General imports in 1934 were valued at 1,353,000,000 crowns (1,266,000,000 in 1933) and exports of Danish products were valued at 1,176,000,000 crowns (1,163,000,000 in 1933). The United Kingdom supplied 30.1 per cent of the 1934 imports (28.1 in 1933); Germany, 21.3 (22.7); Sweden and Norway, 9.6 (9.3); United States, 6.1 (6.0). Of the 1934 exports, the United Kingdom purchased 59.9 per cent (64.4 per cent in 1933), Germany, 15.3 (13.1); Sweden and Norway, 9.5 (7.3). Iron and steel, mineral oils, coal, fertilizers, and automobiles are leading imports.

Total imports in 1935 were valued at 1,329,294,000 crowns and exports at 1,261,080,000 crowns. United States statistics showed imports from Denmark in 1935 of \$3,336,700 (\$1,898,075 in 1934) and exports to Denmark of \$12,480,774 (\$14,507,260 in 1934).

Finance. Budget estimates for the fiscal year ended Mar. 31, 1936, placed current receipts at 395,740,000 crowns (367,398,000 in 1934-35) and current expenditures at 394,430,000 crowns (377,508,000 in 1934-35). These estimates excluded capital accounts in which heavy deficits were expected. The 1934-35 ordinary budget closed with a surplus of 18,000,000 crowns, compared with a deficit of 16,567,000 crowns in 1933-34 (actual 1933-34 receipts, 376,499,000 crowns; expenditures, 393,066 crowns). The public debt on Mar. 31, 1934, totaled 1,292,000,000 crowns (internal, 622,000,000; external, 670,000,000), or about 350 crowns per capita. The crown (krone) exchanged at an average of \$0.1883 in 1932, \$0.1907 in 1933, and \$0.2250 in 1934. Par value after January, 1934, \$0.4537.

Communications. On Mar. 31, 1934, there were 3216 miles of railway line (state, 1555 miles; private, 1661 miles). In the year ended Mar. 31,

1934, the railways carried 41,261,000 passengers and 7,493,000 metric tons of freight, the gross receipts being 120,178,000 crowns. Highways extended 4779 miles. The new highway and railway bridge between Jutland and the island of Funen, which reduced the traveling time between Copenhagen and London by seven hours, was opened in May, 1935. The net tonnage of vessels in the overseas trade entering Danish ports with cargo and in ballast in 1934 was 12,247,000 (12,165,000 in 1933).

Government. The Constitution vests executive power in the King, who acts through a cabinet responsible to the Rigsdag (Parliament). The Folketing (lower chamber) has 149 members elected for four years by proportional representation; the Landsting (upper chamber), 76 members, of whom 19 are elected by the Landsting itself and the remainder indirectly by voters over 35 years of age, the term being eight years. Premier in 1935, Th. A. M. Stauning (Social Democrat), heading a coalition of the Social Democratic and Radical parties.

History. The decline in prices received for Danish agricultural exports continued during most of 1935—due in part to the gradual restriction of the British market—without a corresponding decrease in the level of the Danish cost of living. The resulting hardships imposed upon the Danish farm population were intensified by the increasing burden of servicing the large farm indebtedness. The Stauning Government took a number of steps calculated to relieve the agricultural situation. It followed a cheap money policy to facilitate the conversion of farm mortgages to lower interest rates and established a special fund to promote such operations. It also introduced a bill for the conversion of Danish Credit Association bonds to lower interest rates, but this was rejected by the Rigsdag on Jan. 22, 1935. The law of Aug. 31, 1935, imposed import taxes on cereals, malt, and fodders, the proceeds being diverted to the relief of agriculture.

These measures, however, failed to check discontent among the farmers, who demanded further depreciation of the crown-sterling exchange rate from the existing rate of 22.40 to 30 crowns to the pound. So much Danish farm produce was sold in Britain that a lowering of the exchange rate would increase the farmers' income in crowns without a corresponding increase in the cost of living and in the debt burden. In addition the farmers desired a reduction of taxes. In an attempt to force the Socialist-Radical government to adopt these policies between 30,000 and 50,000 farmers marched to Copenhagen from all parts of the country, presenting their demands on July 28. The government, however, rejected their petition. On August 15 the farmers' executive committee decided to extend the credit given to their British customers from 10 days to three months. The farmers and farm organizations also agreed not to deposit in their banks for remittance to the National Bank sterling remittances received from British customers. The farmers hoped in this way to create a scarcity of sterling in Denmark and thus force their government to lower the exchange rate. As a counter-measure the National Bank raised the bank rate from 2½ to 3½ per cent, although this policy ran counter to the government's policy of fighting the depression through cheap money. The government also declared the "valuta strike" illegal, but the farmers continued their resistance, which seriously hampered the government's economic policy.

When Parliament convened on October 1, Premier Stauning made known his determination to carry the issue to the country. Parliament was dissolved the following day and elections were called for October 22. The result was a decisive government victory. The Social Democrats polled 759,069 votes against 660,782 at the previous election and increased their standing in the Folketing (lower house) from 62 to 68 seats. Their Radical allies retained their 14 seats. The Conservatives, with 293,358 votes, returned 26 deputies; the Liberals, with 292,085 votes, elected 28 deputies (10 less than before). The new extremist farmers' party, splitting from the former Liberal Agrarian party, won five seats with 52,736 votes. The standing of the smaller parties was: Retsforbundet (Justice League), 4 seats; Communists, 27,140 votes, 2 seats; National Socialists, 16,217 votes, no seats; German party, 12,618 votes, 1 seat. As a result of the election, the Social Democratic-Radical ministry was reorganized on November 4 as follows: Prime Minister, Th. A. M. Stauning; Foreign Affairs, Dr. Peter Munch; Finance, H. P. Hansen; Interior, B. Dahlgaard; Justice, M. Steincke; Agriculture, K. M. Bording, all hold-overs. New members were: National Defense, A. Anderson; Social Affairs, L. Christensen; Commerce, K. Jarbol; Public Works, N. Fisker; Education, J. Jorgensen; Religion, J. Hansen. Nine members were Social Democrats and three were Radicals.

Nazi propaganda in Slesvig continued during 1935, despite Danish efforts to prevent it. The German-speaking schools there, although supported by the Danish Government, were reported to have become hotbeds of anti-Danish sentiment. Danish deputies declared in the Folketing that the Slesvig agitation was receiving German financial support and that high officials of the German frontier town of Flensburg were directing the movement for the reincorporation of Slesvig in the Third Reich. Measures of protection against the Nazi threat, backed by a rapidly rearming Germany, were discussed by the Foreign Ministers of Denmark, Norway, and Sweden at their conferences in April and December. The latter meeting was held in Helsinki, Finland, in conjunction with Finnish Socialists. Danish-Swedish relations were further cemented by the marriage on May 24, 1935, of Crown Prince Frederik of Denmark to Princess Ingrid, daughter of the heir to the throne of Sweden. See NORWAY, SWEDEN, FINLAND, and GERMANY under *History*.

DENVER. See WATERWORKS

DENVER, UNIVERSITY OF. A coeducational institution of higher learning in Denver, Colo., founded in 1864. The registration for the autumn quarter of 1935 totaled 2836, while the enrollment in the 1935 summer session was 1458. The faculty had 215 members. The assets consisted of endowment assets of \$2,262,387 and plant assets of \$1,621,518. The income for the year 1934-35 was \$545,114. The library contained 102,177 volumes. The University received the FIDAC award for outstanding work in promoting international understanding. Chancellor, D. Shaw Duncan, Ph.D.

DEPAUW UNIVERSITY. A coeducational institution for higher learning in Greencastle, Ind., under the auspices of the Methodist Episcopal Church, founded in 1837. The enrollment for the autumn session of 1935 was 1268, including 736 men and 532 women. The faculty numbered 92. The productive funds amounted to \$5,210,000, while the total current income for the year was \$431,-

141.20. The library contained 86,982 volumes. President, G. Bromley Oxnam, D.D.

DEPENDENT CHILDREN. See CHILD WELFARE.

DEPORTATION. See IMMIGRATION.

DETROIT, UNIVERSITY OF. An institution of higher education in Detroit, Mich., under the auspices of the Roman Catholic Church and conducted by the Jesuit Fathers, founded in 1877. In the autumn of 1935 there were 2138 students registered. The summer school registration was 496. The faculty numbered 188. The endowment amounted to \$222,580, while the income in 1934-35 was \$497,696. There were 85,806 volumes in the library. President, the Rev. Albert H. Poetker, S.J., Ph.D.

DEUTERONS. See CHEMISTRY.

DE VRIES, de vrès', HUGO. A Dutch botanist, died at Lunteren, Gelderland, May 21, 1935. Born at Haarlem, Feb. 16, 1848, he was educated at Leyden, Würzburg, and Heidelberg, where he studied botany and chemistry. He first attracted attention in 1869 when he won the gold medal of the University of Groningen with his paper "On the Influence of Heat on the Roots of Plants." After writing more exhaustively on the same subject in the following year he received the doctorate degree at Leyden. At Würzburg in 1871 he came under the influence of the great plant physiologist, Julius Sachs, and as a result devoted the next 10 years to the study of plant physiology. Appointed instructor in natural history in the secondary schools of Amsterdam in that year, he remained until 1875, when he returned to Würzburg. While there he prepared a series of papers on food plants for the Prussian Ministry of Agriculture. Two years later (1877) saw him at Halle, where he was privatdocent, and wrote on "The Mechanical Basis of Cell-Stretching," which became one of his best-known works. He was called to the newly-created University of Amsterdam in that year to become instructor in plant physiology, and subsequently became professor of botany. He retired in 1918 as professor emeritus, to devote himself to his experimental gardens. During 1897-98 he was rector-magnificus, and from 1896 was director of the Amsterdam Botanical Gardens. In 1904 he lectured at the University of California, and his lectures were published under the title *Species and Varieties*.

De Vries became famous by his researches in turgidity and heredity. As to the former, he found that it could be temporarily suspended by the use of salt solutions, the action of which, on the cell, he called *plasmolysis*. Much of his later work on cell growth, and his discovery of the tonoplast, was closely connected with these early researches. His first work on heredity and variability was *Intracellular Pangenesis* (1889). In this he propounded the theory that the nucleus is the bearer of all hereditary characters, active as well as latent. Experimenting with cross-fertilization, he formulated anew Mendel's law of the dissociation of hybrids, and upheld his view that hereditary characters are built up of separate units.

Important as the foregoing scientific contributions were, his greatest aid to science was his work entitled *Die Mutationstheorie* (1901-03). For almost twenty years he experimented with the evening primrose, *Oenothera lamarckiana*, and finally produced the theory of explosive modification, through which new species and varieties arise suddenly, rather than slowly and almost imperceptibly. To this, which differed from Darwin's teaching, he

gave the name of *mutation*. Although not the first to expound this idea, De Vries was the first who performed experiments and worked out a theory to fit the facts which they yielded.

In addition to the works already mentioned, he wrote *Plant Breeding* (Chicago, 1907) and *Gruppenweise Artbildung (The Formation of Species by Groups)* (Berlin, 1913), and numerous papers on plant physiology, heredity, and variability. His scientific writings which appeared in various journals were republished in seven volumes under the title *Opera e periodicis collata* (Utrecht, 1918-27). De Vries also understood the difficult art of popularizing the science of botany, especially in the Netherlands.

DICTIONARIES. See PHILOLOGY, MODERN.

DIELMAN, FREDERICK. An American artist, died at Ridgefield, Conn., Aug. 15, 1935. Born in Hanover, Germany, Dec. 25, 1847, he was brought in infancy to the United States where his family settled in Maryland. In 1864 he graduated from Calvert College, Baltimore, and in 1866 became a topographer with the United States Engineers. Having decided to adopt art as a career, he went to Europe in 1872 to study under Wilhelm Diez at the Royal Academy at Munich. When he returned to New York in 1876, he opened a studio and soon became known for charming, minutely executed *genre* pictures, such as his "Patrician Lady," his first exhibit at the National Academy of Design, and graceful dignified heads against leafy backgrounds. As an etcher, he aided in reviving that neglected art, and also illustrated many books that formed standard editions of well-known writers. During his later years he turned to mural painting, some of his best known work being exhibited at the St. Louis Exposition of 1904. Also, he executed designs for mosaics, notably the mosaic panel, "Thrift" in the Albany Savings Bank; those of History and Law in the Congressional Library, Washington, and six in the Iowa State Capitol, Des Moines, Iowa.

In 1881, he was elected an associate member of the National Academy of Design and two years later became a full member, and at the time of his death was ranking academician. He became the Academy's president in 1899, and held the office for 10 years, resigning in 1910. Under his administration the Academy expanded and its influence increased. From 1910 to 1915 he was president of the Fine Arts Federation of New York, and was one of the founders of the Society of American Artists.

Mr. Dielman became a member of the faculty of the College of the City of New York in 1903, but resigned in 1918, and from 1905 to 1931, he was art director of Cooper Union, teaching both day and evening classes. For two years, 1901-03, he served on the Art Commission of the City of New York.

DINDINGS. See FEDERATED MALAY STATES.

DINWIDDIE, EDWIN COURTLAND. An American minister and temperance advocate, died at Washington, D. C., May 5, 1935. He was born in Springfield, Ohio, on Sept. 29, 1867, and educated at Wittenberg College, from which he received the degree of D.D. in 1922, and at Grove City (Pa.) College, from which he graduated M.A. in 1899. He began his advocacy of the temperance cause while still at school, being elected president of the Ohio Young Men's Prohibition League in 1888, and two years later becoming secretary to the Ohio Prohibition Executive Committee. In 1893 he became legislative superintendent of the

Ohio Anti-Saloon League, serving until 1896. Two years previously, in 1894, he had entered the ministry of the Evangelical Lutheran Church. From 1897 to 1899 he was state superintendent of the Pennsylvania Anti-Saloon League, when he became secretary to the Permanent Committee on Temperance of the General Synod of the Evangelical Lutheran Church, becoming chairman of the committee in 1903 and serving until 1918, when the Evangelical Church merged with the United Lutheran Church. For his temperance work in Ohio he was appointed, in 1899, the first national legislative superintendent of the American Anti-Saloon League and served in this position until 1907, and again from 1911 to 1920.

As one of the leading lobbyists at Washington, Dr. Dinwiddie was successful in his efforts to have passed the Anti-Canteen Act of 1901, prohibiting the Army canteen, and to obtain from Congress grants of almost \$3,000,000 with which to build recreation halls at army posts for the enlisted men. He managed the campaigns of 1906 and 1907 that led to the establishment of statewide constitutional prohibition in Oklahoma, and two years later succeeded in having important legislation regulating interstate shipments of liquor passed. Also, he was the leader of the contest before Congress that resulted in the passage of the Webb-Kenyon interstate liquor shipment bill over the veto of President Taft in 1913. He led the campaign for the national constitutional prohibition amendment before Congress, that resulted in an initial vote of 197 for submission to the States, December, 1914, and he directed the campaign for this amendment that passed the United States Senate and the House of Representatives in 1917.

Dinwiddie was active also in securing legislation for increased equipment and personnel of the Coast Guard, 1926-27; for reorganization of the Prohibition Bureau in 1927; for the Jones-Stalker bill for increased penalties for violating the liquor law, 1929.

In 1893, Dr. Dinwiddie became a member of the International Order of Good Templars, eventually holding important posts in that organization, including national legislative superintendent from 1905; national chief templar from 1922, and international lector from 1927 to 1933. In addition he was a member of several other organizations dealing with temperance, and was a delegate to many conventions and congresses, representing the United States at the International Congresses against Alcoholism in 1909, 1911, 1913, 1921, and 1923.

Dr. Dinwiddie was a frequent contributor to newspapers and magazines on topics relating to temperance and its work.

DISARMAMENT. The committee for the Regulation of the Trade in and the Private and State Manufacture of Arms and Implements of War met at Geneva on Feb. 14, 1935, under the chairmanship of M. de Scavenius, Denmark. It had before it two documents: a draft of a convention on the regulation of the trade in and manufacture of arms, prepared by the committee itself, and draft articles for a convention, submitted to the meeting of the Bureau on Nov. 20, 1934, by the American delegation. The committee considered which of these two drafts should be taken as a basis for its discussion and unanimously agreed that the American Draft was the most suitable, because it followed the lines of the limited convention envisaged by the Bureau of the Conference on Nov. 20, 1934.

As a result of the general discussion; the Com-

mittee accepted a programme of work, proposed by its rapporteur, M. Komarnicki, for the purpose of enabling texts to be drafted rapidly for submission to governments represented at the Conference for the Reduction and Limitation of Armaments.

There was first to be a technical study of the problem of the manufacture of arms and the implements of war. This was to be the work of a sub-committee, consisting of representatives of all the delegations on the committee. The technical sub-committee on categories of arms and implements of war was then to meet to examine the proposed classification. After that, the question of the trade in arms would be taken up by a sub-committee, also consisting of all the delegations. There was then to be another meeting of the full committee to coordinate the work of these various sub-committees.

The committee on miscellaneous provisions of the Conference for the Reduction and Limitation of Armaments met from February 18 to 21 under the Chairmanship of M. Bourquin. On its agenda were two questions: (1) The setting up of a Permanent Disarmament Commission, (2) The transformation of the Disarmament Conference into a Permanent Peace Conference (U.S.S.R. proposal). The committee decided to take first that part of the American delegation's proposal relating to the setting up of a Permanent Disarmament Commission, and to consider Articles 17, 18, 19, 34, 35, 36, and 37, which dealt with the establishment of that Commission and with its general duties. The Committee postponed all that concerned the system of supervision itself to enable the committee for the regulation of the trade in and private and state manufacture of arms to announce its conclusions on the measures of control to be embodied in the draft convention, and it was decided to reserve the Soviet proposal for discussion at a later stage.

The committee for the regulation of the trade in and private and state manufacture of arms and implements of war resumed at the end of March the session which had begun on February 14, but which had been interrupted to allow the work of the sub-committee to continue. It finished its work on April 13 by adopting a report that was to be submitted to the governments represented at the Conference for the Reduction and Limitation of Armaments and to the General Commission of the Conference. The report summarized the proceedings of the committee and its sub-committees and of various committees, such as the committee on general provisions and the technical committee of the national defence expenditure commission, which had participated in its work. The report embodied draft texts representing the result of the discussions. These texts are in no way binding on the governments represented in respect of their final attitude, and they do not preclude a compromise where certain differences of opinion still exist. The committee, nevertheless, observed that material progress had been made towards an agreement and a narrowing down of differences of opinion on vital points, and it expressed the hope "that the future work, the final success of which depends exclusively on the solution of a few questions of principle, may be completed in the near future, especially if the general political situation becomes clearer."

Draft articles of the convention, as presented by the committee, consisted of texts unanimously adopted, texts previously adopted by a majority vote and subject to reservations, and alternative

texts to cover cases in which certain delegations were unable to accept decisions of substance approved by the majority. The articles were accompanied by a commentary, which explained how the texts were drafted or indicated the reservations made by the delegations. The report contained three annexes: (1) Report by a committee of jurists; (2) report by a committee dealing with the question of the transit of arms; (3) opinions of the technical committee of the national defence expenditure commission.

A few weeks before his death, Arthur Henderson, President of the Conference for the Reduction and Limitation of Armaments, completed a "Preliminary Report on the Work of the Conference." It was his intention that this document should serve as a provisional statement on the state of the Conference's work. This preliminary Report was issued to all members of the Conference. It consisted of an introduction and 12 chapters.

The introduction began with an account of the League's preparatory work in regard to disarmament, and then gave an outline of the political conditions at the opening and during the course of the Conference, and enumerated the general and special difficulties with which it was faced.

Chapter 1 refers to the various stages of the Conference. The following chapters dealt with Security, Effectives, Land Material, Naval Material, Air Material, National Defence Expenditure, Chemical, Incendiary, and Bacterial Warfare, the Control of the Manufacture of Arms and the Trade in Arms, Exchange of Information, the Permanent Disarmament Commission, and Moral Disarmament. Each chapter ended with a summary of events and conclusions.

Since the first year of the Disarmament Conference (1932) the United States had maintained a permanent delegation at Geneva, with offices, since 1933, on the Quai Wilson—near the League Secretariat and the Disarmament building. In 1933 Hugh Wilson, United States Minister to Switzerland, came from Bern to Geneva to head the delegation. He was to return to Bern when the Geneva office was closed, and the Geneva force was to be reduced to one man with headquarters in the American Consulate. Mr. Wilson was quoted to the effect that the Geneva office was being closed for economic reasons only, and that it did not indicate that Washington had lost interest in the Conference. It remained obvious, however, according to the Geneva correspondent of the *League of Nations Chronicle*, that the Conference was out of the current picture. Until the nations, including the United States, showed some inclination to stop arming to the teeth, a disarmament conference was a travesty. "Obviously, it is folly to seek disarmament in the present mood of the world. The first thing is to change the mood."

In a statement delivered in the House of Commons on July 19 Stanley Baldwin, then Acting Prime Minister, announced that the British government would proceed at once with a new armament programme calling for construction of 41 air squadrons to be completed before the end of 1938. He made no effort to conceal the fact that this decision had been influenced by the international crisis produced by Germany's rearmament programme and the continued failure of the Disarmament Conference to reach an agreement. While the British programme was described as tentative and subject to revision in the light of future developments, it marked a definite turning

point in British policy which might profoundly affect the international situation.

DISCIPLES OF CHRIST. A communion known also as the Churches of Christ and sprung from a movement for Christian unity, which arose in American Presbyterian circles at the beginning of the 19th century, under Barton W. Stone, in Kentucky, and Thomas and Alexander Campbell in Western Pennsylvania. This is the largest religious body having its origin in America. It was fifth among Protestant communions in the United States in 1935. In policy the churches are congregational. There are six major agencies of the communion: The United Christian Missionary Society; Board of Education (College Association); Association for the Promotion of Christian Unity; Pension Board; National Benevolent Association; Board of Church Extension; besides the missionary societies of the States of the U.S., and Provinces of Canada. These agencies are corporations and are related in an advisory way to the International Convention of the Disciples of Christ which meets annually in the late summer or early autumn. The general missionary work of the churches is organized under The United Christian Missionary Society, with headquarters at 222 Downey Avenue, Indianapolis, Ind.

Statistics of the communion show that during the year there were 4540 baptisms in the foreign fields. The 634 mission schools had a total enrollment of 18,182. The communion maintained 14 hospitals and 18 dispensaries which gave 389,437 treatments, a decrease of 27,402 over the previous year. The Church Extension Fund amounted to \$2,913,784. The total church membership throughout the world in 1935 was 1,763,376, a gain over 1934 of 15,400; and in the United States and Canada 1,618,852, a gain of 13,611. The Bible school enrollment for the world was 1,216,607, a loss over the previous year of 7169; and for the United States and Canada, 1,145,432, a loss of 13,009. Contributions, missionary, benevolence, and educational, reported for the fiscal year in the United States and Canada totaled \$1,481,430, a gain of \$69,967.

Among the periodicals published by the communion are *World Call*, *Christian Evangelist*, *Christian Standard*, and *Christian Unity Quarterly*. The president of the International Convention for the year was Dr. D. W. Morehouse, Des Moines, Iowa. Dr. Stephen J. Corey of Indianapolis, Ind., was president of The United Christian Missionary Society.

DODECANESE ISLANDS. See *ÆGEAN ISLANDS, ITALIAN*

DOGS. Two dogs, a big white poodle and an Irish setter, were the headliners in the dog show world in 1935. The poodle, a perfect animal, owned by Mrs. Sherman R. Hoyt, was Nunsoe Duc de la Terrace of Blakeen, winner of best-in-show at the annual Westminster Kennel Club show in February at Madison Square Garden, New York. And the Irish setter was Milson O'Boy, owned by Mrs. Cheever Porter, best at the huge one-day outdoor Morris and Essex show at Madison, N. J., in May. In other years the Westminster winner was considered the leader for the year but the growth of the Morris and Essex show assured the outdoor winner equal greatness with the indoor champion in 1935. There were 2837 dogs benched and 3384 entries at Westminster, and 2827 benched and 3590 entries at Madison.

The year was the 50th anniversary of the American Kennel Club and as such one of the

most successful years in the history of dogs and dog shows. There were several new shows listed and the high marks of each month on the calendar were bettered in the matter of registration.

DOHENEY, EDWARD LAURENCE. An American prospector in oil and industrialist, died at Los Angeles, Calif., Sept. 8, 1935. He was born in Fond du Lac, Wisc., Aug. 10, 1856, and after receiving a high school education left home to seek his fortune. After engaging in various trades, he turned to mining, and for twenty years prospected for gold, first striking metal in Arizona. This led to the opening of the Cave Creek Fields in 1876, and the Wild Rye Creek district a year later. In 1880, he found the Black Range mineral deposits in New Mexico. Subsequently, an accident broke both his legs, and while convalescing he studied law, being admitted to the New Mexico bar. He practiced for about a year, but the lure of prospecting called him and he turned from the legal profession.

While in Los Angeles in 1892 he noticed a wagon loaded with a black tarry substance. Asking what it was, he was told that it was "brear," the Mexican term for pitch. He immediately set out for Westlake Park where it had been obtained. Knowing that "brear" was oil-soaked earth, he reasoned that if the surface were oily, oil must be below. At that time he was without funds, but meeting a friend, Charles Canfield, the two of them managed to obtain enough money to begin operations and leased a vacant lot near the Park. Neither of them knew anything of drilling for oil, so they began to "mine" for it as they had mined gold. They sank a shaft about 150 ft., and as a result secured enough money to go farther. When they had gone down about 225 ft., the oil gushed forth and the oil boom of Los Angeles was on.

The competition became keen and Dohenev looked for new oil fields. He again went prospecting and located the oil fields at Fullerton, Calif., in 1897, and those at Kern River Valley, two years after. Seeking still further, he and Canfield went south to Mexico, and in the Tampico district found the oil deposits that were to bring them fame and fortune. They leased about 450,000 acres in their neighborhood and along the Tamesi River, and formed the Mexican Petroleum Co. in 1900. In March of the following year the first well was built on Cerro de la Pez, and in May it was opened and operations were begun that were to make Mexico the second largest producer of oil in the world. In 1905 and 1906, the Huasteca district was acquired and was formed into the Huasteca Petroleum Company, which in 1925 controlled 1,550,000 acres of Mexico's oil lands. In 1911, the Dohenev interests acquired the Caolric Company, which distributed petroleum throughout South America, and in 1913, the Petroleum Carriers, Ltd., was formed to control the transportation of petroleum in Europe. To distribute the Mexican oil, the Mexican Petroleum Corporation was formed in 1915, and later the Mexican Petroleum Corporation of Louisiana was also organized. In 1916, the Pan American Petroleum Company of California was begun, which controls about 30,000 acres of producing oil land in California, and in 1919, a corporation owned by the Dohenev interests and British capital was formed under the name of the British Mexican Control Company. All these firms were controlled by or were subsidiaries of the Mexican Petroleum Co., Ltd., of Delaware, organized in 1907, and the development of the parent company started by Dohenev. The Pan American Petroleum

and Transport Company, which controlled the Pan American Petroleum Company of California, was also founded in 1916, and in 1924, the steamship fleet, oil lands, and development properties of this corporation were valued at \$155,603,276.

During the Senate investigation of the oil scandals of the Harding administration in 1924, Dohenev was accused of offering a bribe of \$100,000 to Albert B. Fall, Secretary of the Interior, in order to obtain preferential treatment in the giving out of government oil leases, especially that of the Elk Hills naval oil reserves. During the almost endless litigation, Dohenev contended that the money was given merely as a loan from one old friend to another. In February, 1924, the oil leases received by Dohenev were canceled, and in the following June, Fall and Dohenev were indicted for conspiracy in the Elk Hills leases, and Fall for accepting and Dohenev for giving a bribe. In November, 1926, they went on trial on the first charge and in December were acquitted. In 1927 the U.S. Supreme Court found that the Elk Hills and other oil leases were full of fraud and corruption, and two years later Fall was convicted of accepting a bribe and sentenced to a year in prison and a fine of \$100,000. In March, 1930, Dohenev went on trial for giving a bribe and later in the month was acquitted. In 1932 the Government dropped the last conspiracy indictments against him and the criminal cases resulting from the oil scandals were ended.

Dohenev early espoused the cause of Irish freedom and contributed liberally to it, and in 1920 was president of the newly-formed American Association for the Recognition of the Irish Republic. During the World War he placed his fleet of oil ships at the disposal of the government and purchased millions of dollars of Liberty bonds. His active and varied career was one to capture the imagination, and through his death, one of the last of the empire builders passed away.

DOLE, NATHAN HASKELL. An American editor, author, and translator; died in New York, May 9, 1935. Born in Chelsea, Mass., Aug. 31, 1852, he was graduated from Harvard in 1874. After teaching in Massachusetts for several years he went to Philadelphia to become art and music editor of the *Press* in 1881. Six years later he became associated in an advisory capacity with T. Y. Crowell & Co., of Boston, and in 1901 joined D. Appleton & Co., in New York, as secretary of the Publicity Department, retiring a few months later to devote his time to his literary activities.

The first book to bear his name was *A Young Folks' History of Russia*, published in 1881, and this was followed by a score of books, as well as translations of the works of Tolstoi, Daudet, Valdes, and Verga. He was an enthusiastic "Omarist," and for many years was the president of the Omar Khayyám Society. He edited several editions of the *Rubáiyát*, and 1899 published *Omar the Tentmaker, A Romance of Old Persia*. In addition, Mr. Dole wrote many lyrics suitable for Russian musical accompaniment, and with Thomas Bailey Aldrich edited *The Young Folks' Library*. Also he was the editor of *The Greek Poets, The Latin Poets, Breviary Treasures*, the 10th edition of Bartlett's *Quotations*, and of the Glossary of foreign words and phrases appended to Roget's *Thesaurus*. For a time he edited *The Westminster Review* of Atlanta, Ga.

Mr. Dole served as president of the Bibliophile Society from 1901 to 1912, and was a member of

the Poetry Society, and of the advisory council of the Simplified Spelling Board.

His published works, in addition to those mentioned above, included: *A Score of Famous Composers* (1891, under title *Famous Composers*, 2 vols., 1902; revised and enlarged, 1924, 1928); *Not Angels Quite* (1893); *On the Point* (1895); *The Hawthorn Tree, and Other Poems* (1895); *Poems*, for the Educational Music Course (1896); *Life of Francis William Bird* (1897); *Joseph Jefferson at Home* (1898); *Peace and Progress—The Building of the Organ and Onward* (poems, 1904, 1906); *Six Italian Essays* (1907); *The Pilgrims and Other Poems* (1911); *Alaska* (1909); *Life of Count Tolstoi* (1911); *The Spell of Switzerland* (1913); *Rote Songs for the Boston Public Schools* (1915-16); *America in Spitzbergen* (2 vols., 1922). He also edited *The Mistakes We Make* (1898); *Flowers from Persian Poets*, with Belle M. Walker (1901); *Marat's Polish Letters* (1905); *Vocations*, with William deWitt Hyde and Caroline Ticknor (10 vols., 1909-10); *Poems of Dr. Samuel S. Curry*, with Biography (1923); and *Best Humor of 1926*, with Harold S. Dole.

DOMESTIC RELATIONS. See LAW.

DOMINICA. See LEEWARD ISLANDS, BRITISH.
DOMINICAN REPUBLIC (SANTO DOMINGO). A West Indian republic, occupying the eastern part of the island of Hispaniola (Haiti). Capital, Santo Domingo.

Area and Population. The republic has an area of 19,332 square miles and the population at the census of May 13, 1935 was 1,478,121 (894,385 at the 1920 census). The 1935 census populations of the chief cities were: Santo Domingo, 71,297 (94,207 including the suburbs and adjacent region comprising the National District); Santiago, 33,919; San Pedro de Macoris, 18,889; Puerto Plata, 11,777; La Romana, 10,935; San Francisco de Macoris, 10,305. About 40 per cent of the population is white (mainly of Spanish descent), 40 per cent mestizo, and 20 per cent Negro. The official as well as the vernacular language is Spanish. Roman Catholics comprise 97 per cent of the population. In 1933 there were 698 primary schools, with 68,011 pupils; 30 technical schools, with 2298 pupils; and the University in Santo Domingo, with 340 students.

Production. An agricultural country, the Dominican Republic is primarily dependent upon the sugar crop. The sugar harvest for the year ended Aug. 31, 1935, totaled 475,057 short tons (428,309 in 1933-34). American companies operate most of the 21 sugar centrals. The 1935 cacao crop was about 54,000,000 lb. The tobacco crop of about 80,000 bales (of 110 lb. each) was abnormally small. Coffee exports in 1933 totaled 11,794 tons. Livestock in 1935 included 701,008 cattle, 284,189 horses, and 284,052 goats. Sugar refining is the chief manufacturing industry. The forests produce lignum-vitæ, mahogany, and dyewoods.

Foreign Trade. Imports in 1934 were valued at \$10,574,000 (\$9,323,000 in 1933) and exports at \$12,895,000 (\$9,625,000 in 1933). The United States in 1934 furnished 58 per cent of the total imports; Japan, 7.5 per cent; United Kingdom, 7 per cent. Of the 1934 exports, the United States, including Puerto Rico, took 23.4 per cent; United Kingdom, 21 per cent; France, 18.5; Canada, 9.9. Raw sugar, coffee, cacao, molasses, tobacco, and hides and skins are the principal exports.

Exports in 1935 from Dominican ports totaled \$15,530,975. Exports to the United States were valued at \$4,982,872 (\$3,784,939 in 1934) and im-

ports from the United States at \$4,517,553 (\$5,819,915 in 1934).

Finance. Budget estimates for 1935 placed revenues at 9,289,280 pesos and expenditures at 9,276,528 pesos, the anticipated surplus being 12,752 pesos. Gross collections by the Dominican Customs Receivership during 1934 totaled \$3,189,200 (\$2,999,577 in 1933), of which \$2,692,429 was turned over to the Dominican Government. Internal revenue taxes in 1934, exclusive of customs duties, amounted to \$2,040,973 (\$1,689,454 in 1933). Total government revenues in 1934 were reported at \$9,439,000 and total expenditures at \$8,985,000.

The foreign debt as of Dec. 31, 1934, was reported at 16,292,500 pesos (16,320,500 pesos on Dec. 31, 1933). There are no recent data concerning the amount of the internal debt. The peso was equivalent to one U.S. gold dollar.

Communications. The public works programme inaugurated by the Trujillo régime was continued actively during 1935. The following new highways were completed: San Francisco de Macoris-Salcedo, Rincon-Cotuy, Santiago de los Caballeros-Janico. A new bridge over the Nizao River on the main road between Haiti and the Dominican Republic was completed. Improvement of the port of Santo Domingo so as to permit entrance of the largest ocean-going vessels was approaching completion at a cost of \$2,500,000. Vessels entering all Dominican ports in 1933 numbered 1332, of 1,900,856 tons; vessels cleared, 1293, with 1,884,645 tons. Radio-telephone service between Santo Domingo and the United States was inaugurated on Oct. 31, 1935. There are two small railways, with 147 miles of line; about 700 miles of first-class highways; and air connections with most of the American countries through Santo Domingo. In 1934 872 air passengers arrived in the Dominican Republic from foreign ports and 918 departed.

Government. The Constitution of June 20, 1929, revised on June 9, 1934, vests executive power in a President, elected for four years by direct vote. Congress consists of a Senate of 13 members (one from each of 12 provinces) and a Chamber of 35 deputies, all elected by direct popular vote for four years. President in 1935, Gen. Rafael Leonidas Trujillo Molina, who was reelected unopposed for a second term on May 16, 1934. A National District, embracing Santo Domingo and its vicinity, was established on Jan. 1, 1935, with a representation of one Senator and two Deputies in Congress. President Trujillo's Dominican party was the only political organization permitted in the republic.

History. Writing in *Current History Magazine* for June, 1935, Hubert Herring described political conditions in the Dominican Republic under President Trujillo as follows: "The press is muzzled; there is no freedom of speech; men are afraid to talk even in the privacy of their homes. Spies are everywhere. Trujillo has recruited his own band of secret police. Political murders increase, while hundreds who dared to criticize have fled the country."

Adherents of President Trujillo, on the other hand, pointed to his numerous tangible achievements. The budget was balanced, interest payments on the foreign debt were continued throughout the depression, and the service of the foreign debt was reduced through the agreement of Aug. 16, 1934, with the Foreign Bondholders' Protective Council and the United States State Department. Order was maintained by a small, efficient army of some

3000 men. An extensive programme of public works was carried out without resort to new foreign loans. Government lands were distributed to poor farmers. Other reported activities of the government were the construction of schools and reorganization of the educational system, a campaign against malaria and other diseases, establishment of model farms for the teaching of agriculture, repeal of the property tax and the imposition of other taxes designed to encourage national industries, etc. Another achievement to Trujillo's credit was the settlement of the 91-year-old boundary dispute with Haiti, announced in a joint statement issued Feb. 27, 1935, by the Presidents of the two republics. (For the terms of settlement, see the *Bulletin of the Pan American Union*, May, 1935, p. 370-371.)

With a strict censorship prevailing within the country, it was difficult to determine the truth of assertions that hundreds of Trujillo's opponents had been murdered, imprisoned, or had mysteriously disappeared. Some evidences of iron-handed dictatorship came to light during the year, however. On April 25 four Dominican citizens fleeing from the country on board the SS *Borinquen* were forcibly removed from the ship after it had sailed from Santo Domingo. On April 28 an assassin, believed to have been one of Trujillo's secret agents, attempted to murder Dr Angel Morales, leading opponent of the Trujillo Government, in New York City, where he had taken refuge. Dr. Morales, who was formerly Dominican Minister to Washington, was absent from his apartment and escaped injury, but his secretary, Sergio Bencomse, was mortally wounded.

Early the same month, Trujillo's police announced the arrest in Santo Domingo of Amadeo Barletta, Italian consul and prominent business man, on charges of conspiring to assassinate the President. Barletta's friends asserted that this charge was trumped up to force him to cease manufacturing cigarettes in competition with a company allegedly controlled by Trujillo. Barletta was finally freed on May 22 on the insistence of Mussolini. In March foreign business men in the republic were threatened with deportation and domestic merchants with correspondingly severe penalties if they raised prices following the imposition of new taxes by the government. A tax of 10 per cent on remittances to foreign countries was decreed, ostensibly to prevent the "flight of capital," but the meaning of the decree was so uncertain that the banks were compelled to cease selling foreign exchange.

On June 13 the Dominican Legation in Washington, D. C., announced that President Trujillo had invited all Dominicans residing abroad to return at national expense "without any exception and regardless of the reason which caused their departure from the country." On June 29 the Dominican Government gave specific promises that the leading Dominican political exiles in the United States would have their estates restored to them if they returned. Later in the year President Trujillo announced his intention of paying a visit to the United States.

In accordance with the laws of Sept. 5 and Oct. 16, 1934, the National District was inaugurated on Jan. 1, 1935. An independent political and judicial entity, it comprised all but five sections of the former commune of Santo Domingo.

DOUGHTON DEBT LIMITING ACT.
See UNITED STATES under Congress.

DRAMA. United States. In New York the very first week of January introduced two of the season's outstanding offerings, both highly successful, continuing with unabated popularity into the Summer or later. One was Robert E. Sherwood's *The Petrified Forest*, a melodrama of Arizona bandits, philosophy and renunciation made especially memorable by the acting and presence of Leslie Howard in its chief rôle with exceptionally competent assistance from Peggy Conklin, Humphrey Bogart, and Charles Dow Clark. The other, arriving on the same date, was *The Old Maid*, a drama fashioned by Zoe Akins from Edith Wharton's novel, one of her series of pictures of life in old New York. Starting under the handicap of rather faint praise from even some of the more discerning critics on the ground that it was a reversion to a superannuated and over-sentimental type, it nevertheless grew in favor and approval to the point of ultimately being awarded, despite the customary mild controversy, the Pulitzer Prize for 1934-35. The acting honors were divided mainly between Helen Menken in the title part and Judith Anderson in a rôle of equal prominence, with George Nash and Margaret Dale also contributing ingratiating performances. The appearance of this pair of hits was followed a week or so later by two more of comparable popularity in J. B. Priestley's *Laburnum Grove*, a novel, amusing and mildly baffling mystery play wherein the author disregarded with impunity the ancient law of dramatic construction which held that the audience, at least, must not be left in doubt of the final outcome, and for which Edmund Gwenn, who had become pleasantly identified with the piece, written primarily for him, in London, was transported to repeat his success in America, aided by Melville Cooper, Elisabeth Risdon, and Molly Pearson; and a harum-scarum comedy by Dorothy Bennett and Irving White entitled *Fly Away Home* involving the unpremeditated reunion of a divorced couple whose four unconventional and amazing children, lacking paternal discipline for a dozen years, are found to be sadly in need thereof. With these came a malodorous and exotic piece by Noel Coward, *Point Valaine*, deservedly unsuccessful notwithstanding the fact that it provided Alfred Lunt, Lynn Fontanne, Osgood Perkins, and Louis Hayward with rôles demanding exceptional acting ability which they handled with admirable skill.

For the first time in its career the Theatre Guild sponsored a production not its own by importing from London, in association with the British impresario, Charles B. Cochran, the German actress, Elisabeth Bergner, playing in English in Margaret Kennedy's *Escape Me Never*, a continuation of her saga of the eccentric Sanger family but lacking the merits of *The Constant Nymph*. Interest in Fraulein Bergner's individual and highly resourceful performance, as well as in those of Hugh Sinclair and Leon Quartermaine, far transcended the play itself. January, however, closed with a fifth decided hit, an hilarious, though sometimes unmannerly, farce by John Cecil Holm and George Abbott called *Three Men on a Horse*, whose run carried well over into the ensuing year. In this instance chief acting glory went to William Lynn for his portrayal of a mild-mannered, plodding commercial rhymester who, by virtue of his uncanny yet disinterested flair for picking winners, finds himself suddenly pitchforked into the maelstrom of race-track gambling, while Sam Levene was almost intolerably realistic as a high-pressure tout.

Fortune smiled less often on February, which



Vandamm Studio

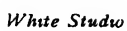
"THE OLD MAID"
Judith Anderson and Helen Menken
The Pulitzer Prize Play for 1945



Vandamm Studio

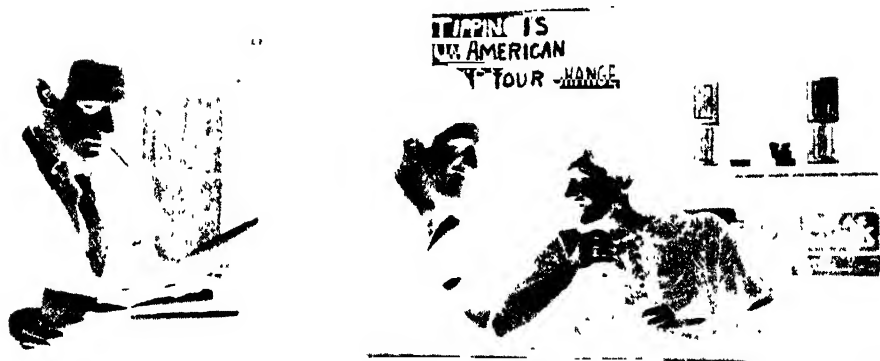
"VICTORIA REGINA"
Helen Hayes as the Queen on her Jubilee

DRAMA



White Studio

Jane Cowl and Lily Cahill in a scene from
"FIRST LADY"



Vandamm Studio

"THE PETRIFIED FOREST"

Leslie Howard, Robert Porterfield, and Peggy Conklin

delivered but little that proved durable. Among the short-lived ventures were two adaptations of modern Spanish dramas, *Field of Ermine*, translated by John Garrett Underhill from the original of Jacinto Benavente, and *Bitter Oleander*, wherein José A. Weissman performed a similar office for Federico Garcia Lorca. France also contributed a delightful but transient item in André Obey's *Noah*, a fantasy cleverly adapted into English by Arthur Wilmurt, with musical obbligate by Lois Horst. In the title rôle Pierre Fresnay, the French actor who had come to America a few months previously to appear with Yvonne Printemps in Noel Coward's *Conversation Piece*, gave a capital imaginative portrait of the Biblical character, and the spirit of the offering was happily captured by the cast as a whole. The long-contemplated revival of *Rain*, for which Tallulah Bankhead had so often been urged as the logical successor of the late Jeanne Eagels in the part of Sadie Thompson, took place as planned but without causing more than the mildest flurry. The Moscow Art Players (not to be confused with the famous Moscow Art Theatre) were visitors for six or seven weeks with a repertoire of Russian classics and modern Soviet pieces, among them Gogol's *Revisor* as perhaps the most favored item. Bernard Shaw, as represented by the Theatre Guild's production of his newest fantasy, *The Simpleton of the Unexpected Isles*, found his public waning even as his facility for turning out real drama seems to wane, and this despite the presence in the cast of Nazimova, Lawrence Grossmith, Romney Brent, and Rex O'Malley, along with other competent players. But February did introduce a new playwright in Clifford Odets, an associate of the Group Theatre, whose *Awake and Sing*, presented by that organization, disclosed him as an ardent sympathizer with the proletariat and possessor of strongly radical tendencies. In the following month two other pieces by the same author, *Till the Day I Die* and *Waiting for Lefty*, each in one act but numerous scenes, were staged, and served to confirm the earlier impression of Mr Odets as an earnest and vigorous, if not inspired, dramatist, particularly the last-named, which concerned itself with a recent taxicab strike. Reasonable success also attended Frederick Jackson's *The Bishop Misbehaves*, an entertaining mystery comedy in which Walter Connolly had the pleasant opportunity of disporting himself as a highly reverend gentleman with a long suppressed leaning toward amateur detective work. The piece subsequently found great favor among the Summer theatres. But not even the exceptionally fine work of such players as Robert Loraine, Cecilia Loftus, the late Moffat Johnston, Elena Miramova, Fania Marinoff, Eric Wollencott, and Owen Davis, Jr., was able to keep Louis Bromfield's adaptation of Edouard Bourdet's *Les Temps Difficiles* afloat for more than a month. The English version bore the title *Times Have Changed*. Marc Connelly's *The Green Pastures* returned to New York for a final engagement, early in the course of which Richard B. Harrison, the devout Negro actor who had played the rôle of "The Lawd" more than 1600 times without missing a single performance, was stricken and died, his place being thereafter taken by Charles Winter Wood, his understudy.

Early March brought *Petticoat Fever*, by Mark Reed, in which Dennis King, who had hitherto divided his talents between musical comedy and romantic drama, disclosed further versatility by evincing an equal facility for light farce, in which

he was amusingly assisted by Leo G. Carroll and Doris Dalton. This, however, proved to be almost the last notably successful offering of the so-called Spring season, although a tragic melodrama of aviation, Frank Wead's *Ceiling Zero*, continued from mid-April into the Summer with Osgood Perkins in its principal rôle. The few productions of this period which, without scoring hits, nevertheless deserve a place in the record, were John van Druten's *Flowers of the Forest*, presented by Katharine Cornell and her company; *Kind Lady*, an especially gripping crook play fashioned by Edward Chodorov from a Hugh Walpole story, which had the advantage of exceptionally fine performances by Grace George and Henry Daniell; a comedy by E. M. Delafield, the novelist, entitled *To See Ourselves*, with Patricia Collinge; *If a Body*, a mystery drama by Edward Knoblock and George Rosener; and a piece called *Something Gay*, by Adelaide Heilbron, which occupied the time of Tallulah Bankhead, Hugh Sinclair, and others for a number of weeks. *Recruits*, a comedy with music, offered by the Jewish Workers' Art Theatre, meanwhile drew a considerable following, and the season's low mark was registered by something named *Reprise* with but a single performance. The Theatre Guild met disaster in the form of a "satirical revue" known as *Parade*, and The Players Club brought the season to a semi-official close with its week's revival of *Seven Keys to Baldpate*, the highly successful mystery comedy adapted by George M. Cohan more than 20 years previously from Earl Derr Biggers' then popular novel. In the brief resuscitation Mr. Cohan himself appeared in the rôle taken in the original run by the late Wallace Eddinger. As usual the cast bristled with names of well-known players.

During the vacation season there was the customary activity among the summer resort theatres throughout the country, divided more or less evenly between stock presentations of recent successes and try-out productions of new pieces hopeful of later metropolitan careers. Few, however, of these hopes had been realized by the close of the year.

The fall season, despite various fitful and ill-fated attempts, succeeded only after mid-September in getting positively under way, the occasion then being the appearance of Beatrice Lillie, accompanied by a galaxy of lesser lights, in a revue, *At Home Abroad*, by Howard Dietz and Arthur Schwarz, which promptly established itself as a decisive hit. Oddly enough, thereafter, two of its predecessors which had earlier experienced difficult sledding, took root and were still current when the year expired. One was an unpretentious comedy entitled *Moon Over Mulberry Street*, the other a mystery melodrama, *Night of January 16*, whose chief claim to fame lay in the novelty of having its all-important trial jury selected from the audience present at each performance and of leaving the choice of two available endings to the decision of that jury. Another early offering of more limited drawing power was *A Touch of Brimstone* with the normally agreeable Roland Young playing an extremely disagreeable character, and Mary Phillips figuring sympathetically as his long-suffering wife. The Theatre Guild made an unfortunate start with a theoretical and political drama by the militant-pacifist Rev. Dr. John Haynes Holmes and Reginald Lawrence, *If This Be Treason*. Success was also denied to a dramatization by Sidney Howard of Humphrey Cobb's too realistic war novel, *Paths of Glory*. But again two other plays that had

opened under uncertain auspices managed eventually to establish themselves as durable attractions if not actual hits. These were *Blind Alley*, a crime melodrama with a psychoanalytical slant, by James Warwick and with Roy Hargrave and George Coulouris for its protagonists, and *Remember the Day*, Philo Higley and Philip Dunning's tender comedy of adolescent love which was given the benefit of an ingratiating performance of its central boy rôle by young Frank M. Thomas, Jr.

The outstanding artistic achievement of the Fall was unquestionably Maxwell Anderson's poetic tragedy of injustice and the underworld, *Winter-set*, in which Burgess Meredith, Richard Bennett, and a young actress known to the stage simply as Margo acquitted themselves with distinction and for which Jo Mielziner designed one setting in particular conveying the atmosphere of a Whistler nocturne. By early October something like a record had been established for the modern theatre with three productions of Shakespeare. In two of them—*Othello* and *Macbeth*—the gifted English players, Philip Merivale and Gladys Cooper, were starred with Kenneth MacKenna and Alexandra Carlisle as their chief support. But they were soon forced to the conclusion that their public preferred them in the modern drama. The other was the Theatre Guild's second presentation of the season, Alfred Lunt and Lynn Fontanne's idea of *The Taming of the Shrew*, first shown by them to "the road" in the Spring. Their rowdy and boisterous conception of the work, with circus features, appealed strongly to, presumably, playgoers who had never seen the piece done as high comedy instead of riotous farce, and scored a pronounced hit. A soviet-style farce-comedy, *Squaring the Circle*, adapted by Eugene Lyons and Charles Malamuth from a popular Russian piece by Valentine Katayev, also lasted over into 1936. But a new play by the uneven British dramatist, John van Druten, *Most of the Game*, proved completely disappointing to American audiences.

For its third offering the Theatre Guild did the unusual in bringing out an operatic version of one of its own earlier triumphs, *Porgy*, DuBose and Dorothy Heyward's picturesque folk drama of the Charleston Negro originally produced in 1927. It was found to lend itself admirably to an effective score by George Gershwin with lyrics partly by his brother Ira, partly by Mr. Heyward himself. Rechristened *Porgy and Bess*, with nearly all parts capably acted and sung by Negroes, including Todd Duncan and Anne Brown in the title rôles, this too developed into a substantial hit. Its appearance was followed two days later by an even more pronounced success in *Jubilee*, a satirical musical comedy de luxe with book by Moss Hart, tunes by Cole Porter, in which, at the close of the year, the brilliant cast headed by Mary Boland and including also Melville Cooper, Charles Walters, Margaret Adams, Derek Williams, June Knight, Mark Plant, and May Boley as principals seemed destined to disport themselves throughout the season, at least. Yet other works by well-known playwrights were meanwhile faring pretty badly—among them Philip Barry's *Bright Star*, which was tempting fate again after a similar experience out of town a year earlier; Martin Flavin's allegory, *Achilles Had a Heel*, which Walter Hampden esteemed highly enough to produce; and *Eden End*, by J. B. Priestley. Slightly better fortune, however, attended a so-called melodramatic farce, *Crime Marches On*, in which Bertrand Robinson and Maxwell Hawkins amusingly ridiculed such

institutions as radio advertising and the Pulitzer Prizes, and which was performed with suitable spirit by young Elisha Cook, Jr., Charles D. Brown, and Will Rogers' charming daughter, Mary; also a somewhat baffling work on the Pirandello order, B. M. Kaye's *On Stage*, wherein the question was raised as to what might happen to a playwright if by chance the characters he had created refused to act in the manner prescribed for them and decided to take matters into their own hands. Osgood Perkins argued the point for the playwright and Selena Royle, Donald Macdonald, Claudia Morgan, and Frederic Worlock were among the recalcitrant creatures of his imagination. *Mulatto*, an uncommonly sincere and restrained work on the subject of racial injustice, written by a Negro, Langston Hughes, with that highly gifted colored actress, Rose McClendon, in its cast, succeeded probably beyond all expectations by continuing over from late October into the new year.

From this point until, and including, the holidays the number of deserving hits, if not quite equal to the casualties, was at least great enough to give to the first half of the new season a distinction that had been missing from the theatre for several years. Among the outstanding contributors thereto was a production by Norman Bel Geddes of *Dead End*, written by Sidney Kingsley, whose *Men in White* had captured the Pulitzer Prize a year or so previously. The later work sketched in vivid fashion the life history of a gangster and was further notable for the realistic novelty of its setting. Another was a dramatization by Helen Jerome of Jane Austen's delightful early 19th century novel, *Pride and Prejudice*, enlisting the talents of a notable cast that included Adrienne Allen, Colin Keith-Johnston, Lucile Watson, Helen Chandler, Percy Warham, Brenda Forbes, and Viola Roache. Next in order came *Parnell*, a romantic and reasonably authentic biographical drama dealing with the climax of the career of the great Irish patriot of that name and the chivalrous circumstances of his downfall—a work from the pen of a new playwright, Mrs. Elsie Schaffer, who died while rehearsals were under way. The English actor, George Curzon, came to America to enact the title rôle, but greater glamour attended the performance of Margaret Rawlings, also from London, as the lovely Kitty O'Shea. Effie Shannon, Edward J. MacNamara, John Emery, and Barry Macollum lent abundant additional credit to the occasion. Then, after many postponements, came *Jumbo*, the magnitudinous offering of Billy Rose, for which the huge old Hippodrome was reconditioned into the semblance of a vast one-ring circus tent and which comprised most of the familiar and essential circus features tied together by a comparatively gratuitous musical comedy plot dashed off by Ben Hecht and Charles MacArthur. Prominently involved in these festival proceedings were Paul Whiteman (with band), Jimmy Durante, Arthur Sinclair, A. P. Kaye, W. J. McCarthy, Donald Novis, Gloria Grafton, "Poodles" Hanneford, Bob Lawrence (for his voice), one A. Robins, a remarkable clown, and even several veteran performers from the days of Barnum & Bailey; also a genuine menagerie.

Two items which, though not greeted with success, nevertheless are entitled to a place in the record, were *Night in the House*, a gruesome importation from London, where it was known as *The Old Ladies*, adapted by Rodney Ackland from Hugh Walpole's story of that name and skilfully played by a cast that consisted almost entirely of Nance

O'Neil, Josephine Hull, and Mildred Natwick; and *How Beautiful with Shoes*, a praiseworthy but inept attempt, on the part of Wilbur Daniel Steele and Anthony Brown, to achieve something idyllic, toward which the acting of Marie Brown, Myron McCormick, Harry Bellaver, and Ralph Riggs contributed considerably. The Group Theatre, which, as previously recorded, had gone proletarian in the Spring at the instance of one of its own playwright members, Clifford Odets, found almost no enthusiasm at all for its first Autumnal offering, *Weep for the Virgins*, which was virtually forgotten by mid-December, and not a great deal for its second, *Paradise Lost*, another Odets work, which could hardly be said to fulfil the promise of his earlier pieces. A much more important drama of the radical order, Albert Bein's *Let Freedom Ring*, adapted from Grace Lumpkin's book, *To Make My Bread*, after a brief career under the managerial wing of its author, was taken over by the Theatre Union and remained current beyond the end of the year. As had happened once back in May, another production in the Fall, *Satellite* by name, went straight to the storehouse at the close of its first performance. With December came Eva Le Gallienne, no longer as standard-bearer of any Civic Repertory organization but as a stellar attraction with a repertory of three bills, the only one of which that was new for her being Ibsen's decidedly dated *Rosmersholm*.

The balance of the chronicle, in so far as New York is concerned, deals with practically nothing but hits—of varying proportions, to be sure, but deeply enough rooted to carry them over, mostly well over, into 1936. Chronologically the list is headed by *First Lady*, a scintillating comedy by Katharine Dayton and George S. Kaufman imputing to the feminine portion of the inner political circles of the Nation's capital extraordinary sway but few scruples in the matter of the making or breaking of candidacies for even the highest office. Jane Cowl was the bright particular star of the occasion with Lily Cahill as her foil in a battle royal of the ladies, with Stanley Ridges, Oswald Yorke, Ethel Wilson, Jessie Busley, and Thomas Findlay among those lined up on one side or the other. Next followed *Boy Meets Girl*, an hilarious picture by Bella and Samuel Spewack of goings-on among the busier purveyors of scripts to the talking picture trade in Hollywood, supposedly inspired by a certain two in real life, that depended for the success which was its lot solely upon its own fun and speed and appropriate acting by players with hitherto comparatively unfamiliar names—in particular Jerome Cowan, Allyn Joslin, and Joyce Arling. Then *May Wine*, a musical piece of uncommon type by Sigmund Romberg, Oscar Hammerstein 2d, and Frank Mandel, differing from the familiar formula in that it boasted an unusually insistent plot offset by a complete, or nearly complete, lack of chorus features. Several of the Romberg airs were especially pleasing and the important rôles were capably handled by Walter Slezak, Nancy McCord, Walter Woolf (King), Robert C. Fischer, and Leo G. Carroll.

Mme. Alla Nazimova, long famous for her portrayals of the Ibsen heroines, appeared for the first time as Mrs. Alving in an admirable production of *Ghosts*, with exceptionally capable assistance from Harry Ellerbe and McKay Morris. Another welcome London importation was *Libel*, by Edward Woolf, a singularly gripping English courtroom drama involving an ingeniously contrived case of questioned identity, finely acted by Colin Clive,

Wilfrid Lawson, Ernest Lawford, Frederick Leicester, Joan Marion and other members of a cast distinctively British. Katharine Cornell brought back to New York for its second Holiday engagement her notable presentation of *Romeo and Juliet*, differing from that of a year earlier only in the persons of the Romeo, Mercutio, and Nurse, played by Maurice Evans, Ralph Richardson, and Florence Reed respectively. Christmas night disclosed one more edition, not startlingly novel in any important respect, of George White's *Scandals* with Rudy Vallee, Willie and Eugene Howard, and Bert Lahr heading its roster of entertainers. Then, on the evening after Christmas, the year virtually ended for the Theatre with the offering of an abbreviation of Laurence Housman's drama-form biography of England's longest-reigning queen, *Victoria Regna*, distinguished especially for the remarkable skill displayed by Helen Hayes in compassing credibly a full 60 years of the life and career of that doughty sovereign. Excellent support was contributed by Vincent Price in the rôle of Albert, Prince Consort. The actual final presentation of the year, *Tomorrow's a Holiday*, though obviously too new for its chances to be positively gauged, involved a plot so weighted down with age as to seem unlikely to survive the transfusions administered by two Viennese playwrights and the American Romney Brent.

Great Britain. The post-Holiday season in London was slow to start, but January saw at least one hit, *Love on the Dolce*, a thoughtful and impressive work by Ronald Gow and Walter Greenwood, introducing a promising new actress in Wendy Hiller. This ran throughout the year. Another production with an even longer record of success (dating actually from late in 1934) was a modern adaptation of an old Chinese classic, *Lady Precious Stream*, done into English by Dr. S. I. Hsiung and staged in the characteristic Oriental manner with Occidental players. Norman Ginsbury figured as author of *Viceroy Sarah*, an historical item concerned with the famous Duchess of Marlborough who was so important a figure in the reign of Queen Anne. The veteran Irene Vanbrugh portrayed the doughty lady. An unusually credible piece on the topic of amnesia was adapted by Dion Titheradge from a French original and played by Leslie Banks as *Man of Yesterday*. A courtroom drama, offered by Matheson Lang, commenced its career as *For the Defence* but was presently renamed *There Go All of Us*. John Hastings Turner was its author.

One of the risks of attempting to uproot a performer steeped in the traditions of his own métier and transplant him into an entirely different one was exemplified when a management more daring than judicious turned London's famous music hall comic, George Robey, loose on the rôle of Falstaff in Shakespeare's *King Henry IV, Part 1*. J. B. Priestley's *Cornelius* was hailed as his best play, though it failed to become his most popular. Even New York's record for a full week was surpassed in London in late March by one that brought 13 premières. Among them was Cosmo Hamilton and Anthony Gibbs' *The Aunt of England*, a Victorian comedy whose special distinction was the presence of Haidee Wright as a Dowager Duchess. John Gielgud, as producer, offered Rodney Ackland's dramatization of Hugh Walpole's story, *The Old Ladies*, a grim but arresting tale of a desolate lodging house with four women as the only characters. April brought a new Charlot revue, *Char-a-bang*, as well as another pronounced

success in Robert E. Sherwood's Anglicized version of Jacques Deval's entertaining picture of exiled Russian nobility reduced to the status of domestic servants in a French bourgeois household, *Tovarich*, in which Sir Cedric Hardwicke and Eugenie Leontovich figured with distinction. Reginald Arkell's *1066* and *All That* proved to be a rollicking burlesque of English history; *The Flying Trapeze*, a very appealing spectacle of the Paris of 1860 with music partly at least by Ralph Benatzky, and with Jack Buchanan as the central figure; *Roulette*, by Harry Graham from Laszlo Fodor's Hungarian original, notable mainly for the work of the versatile Margaret Rawlings in a secondary rôle. Seymour Hicks came forth in his own dramatization of *The Miracle Man*, the Frank L. Packard novel that George M. Cohan cut to stage measure for America more than 20 years ago. May witnessed a particularly heart-warming occasion in the Golden Jubilee testimonial tendered by the London stage to Marie Tempest, the incomparable.

June disclosed undiminished activity, an outstanding presentation being an exceptionally ingenious murder play by, and with, Emyln Williams, entitled *Night Must Fall*. Dame May Whitty was also conspicuous in its cast. Merton Hodge's *Grief Goes Over* achieved little beyond providing an effective character for Dame Sybil Thorndike. London took the English version of André Obey's *Noah* straight to its heart with John Gielgud in the title rôle.

Summer brought the usual Drama Festival at Malvern, with Shaw's *Simpleton* of the *Unexpected Isles* as its chief novelty. There, as earlier in the year in New York, the author was caustically criticized for his arrogant disregard of the basic laws of dramatic structure. September introduced *The House of Borgia*, by Clifford Bax, a work disappointingly lacking in the requisite color but remarkable for the fact that the beautiful Lucrezia of that name was portrayed, after considerable research on Mr. Bax's part, not as the usual she-devil but as a person of admirable character. Bruno Frank's *Nina* introduced another German refugee, Lucie Mannheim, as an actress of more than ordinary talent. William Devlin, the young actor who in the preceding year had distinguished himself at the age of 22 by an admirable performance of King Lear, gained fresh renown for his work in the title part of Ibsen's *Peer Gynt* in a new translation by R. Ellis Roberts.

The closing three months of the year saw, probably, as many new productions of note as all the others combined. In October James Parish's *Distinguished Gathering* had an experimental tryout in a suburban theatre, whereby it was found to be an unusual and skilfully contrived tale of murder, in some respects of similar type to Sir James Barrie's *Shall We Join the Ladies?* A more regular presentation soon followed. James Bridie's shrewdly humorous work, *The Black Eye*, furnished excellent opportunities for Stephen Haggard and Jean Cadell. *Espionage*, by Walter Hackett, was found both interesting and ingenious. And then came John Gielgud's admirable staging of *Romeo and Juliet* in which, at first, the actor-manager acted the Mercutio, Laurence Olivier the Romeo, Peggy Ashcroft the Juliet, and Edith Evans the Nurse. Under this arrangement the two ladies received the greater acclaim. Subsequently, but according to the original plan, Mr. Gielgud and Mr. Olivier exchanged rôles to good advantage. Robert Morley's *Short Story* gave delightful oc-

cupation to so distinguished a trio as Marie Tempest, A. E. Matthews, and Ursula Jeans. *Murder Gang* was found an authentic as well as militantly indignant and scathing picture of conditions as its author, George Munro, a London crime reporter, knew them. Basil Dean collaborated with him in giving suitable form to his dramatic protest. Ernest Milton tried his hand at Shakespeare's rarely offered *Timon of Athens*. *Not for Children*, with which its American author, Elmer Rice, had long threatened New York, was found upon its special British experimental première to be a much-involved satirical fantasy.

France. In Paris, although, with a few notable exceptions, the usual active coterie of playwrights were busily engaged in turning out new works, their product was singularly lacking in distinction as well as in durability. As a result there was frequent recourse to the drama of other nations, such as a new work by Pirandello, *Ce Soir On Improvise*, one more phase of his characteristic topic of stage illusion; an adaptation by Alexandre Arnoux of the Spanish Calderon's 17th Century *El Medico de Sa Honra*; and Maurice Maeterlinck's symbolic though disappointing *Princesse Isabelle*. Of the native dramatists, François Porche contributed a comedy of the court of Louis XIV, *Un Roi*; *Deux Dames et un Valet*, Maurice Rostand a deliberately sensational item on the trial of Oscar Wilde; Jacques Bousquet the book of an amusingly anachronistic musical picture of ancient Rome, *Les Joies du Capitole*, with lyrics and score by Albert Willemetz and Raoul Moretti respectively. Jean Sarment was represented by *Madame Quinze*, an attempt to whitewash the reputation of Louis XV; René Benjamin by the fantastic and sprightly *Grouette*; and a new playwright, Loic Le Gouriadec, entered the ranks with *Une Jeune Fille A Révé*. Louis Verneuil figured as co-author with Georges Berr of *L'Homme au Foulard Bleu*, a modernized version of their own *Guignol*, and also as author of both *Vive le Roi* and *Les Fontaines Lumineuses*. But the most important contribution to the first half of the year was Stève Passeur's *Je Vivrai un Grande Amour*, a work notable for the exaltation exemplified in its central character.

During the Summer a version of the Passion Play met with extraordinary popular enthusiasm as presented out of doors before the Cathedral of Notre Dame. In early Fall Sacha Guitry disclosed two new works, neither of which measured up to his standards—one a philosophy of middle-aged love and temperament entitled *Quand Jouons-Nous la Comédie?* the other, in which he personally appeared, *La Fin du Monde*.

Germany. In Germany the Nazi-imposed restrictions on drama continued to exert a strangling influence upon the impetus toward original work, and to confine the scattered theatrical representations largely to revivals of national and other classics, with an occasional new operetta of the Viennese type, such as *Die Vielgeliebte*, with book by Rudolf Koller and music by Nico Dostal, a disciple of the school of Strauss and Lehár. In Hamburg during the Summer Hannsgeorg Lauenthal, a young actor of 22, distinguished himself in the title rôle of Schiller's *Don Karlos*.

Other Countries. Spain, especially Madrid, seized the occasion to memorialize the tercentenary of the death of her most famous and prolific dramatist, Lope de Vega, with a series of productions of his works, mainly in modernized adaptations. Throughout the Soviet Union there was evidence

of a consistent growth of interest in the theatre, which was fostered by the establishment of an increasing number of traveling stages and troupes, as well as subsidized stationary playhouses.

A similar condition existed in Sweden under the impetus of the aid contributed by the State. The traveling theatres operated over a circuit of some 70 cities and towns on a subscription basis twice as extensive as that of the preceding year. It was not at all uncommon for patrons to journey as far as 60 miles to attend a production. Repertories were broad and international in scope, including works of Shakespeare, Sheridan, Tolstoy, Eugene O'Neill and, of course, Strindberg; also operas by Puccini, Rossini, etc. The operetta type was found especially popular north of the Arctic Circle. This healthy activity was doubtless a main inspiration for a number of new dramas by native playwrights—Ragnar Josephson, Per Lagerkvist, and Sigurd Siwertz.

In Dublin the famous Abbey Theatre organization underwent a transition period, torn by problems and an insistent demand for a broader policy and scope than heretofore. A six-year breach with Sean O'Casey, which had started with the rejection by the Abbey company of his *The Silver Tassie* on religious grounds, was finally healed by placing the work in rehearsal. Nevertheless its appearance was the signal for an outburst of indignation and controversy on the part of the Abbey's regular patrons. As part of the widening scope certain of the plays of Bernard Shaw were added to the repertory, which commenced to assume an international aspect. A comparable, though less broad, policy also went into effect at the Gate Theatre.

DREYFUS, ALFRED. A French artillery officer, died at Paris on July 12, 1935. He was born at Mulhausen in Upper Alsace, Oct. 9, 1859, and when the residents of Alsace-Lorraine were forced to declare their nationality, as a result of the treaty of Frankfurt in 1872, the Dreyfus family, with the exception of one son past military age, remained French and went to Paris to settle. At the age of 19, Alfred started his military training at the École Polytechnique, and two years later passed to the École d'Application, being commissioned a lieutenant in 1882, and ordered to the 31st Artillery Regiment at Le Mans. He was promoted to captain in 1889 and sent to the École Centrale de Pyrotechnie Militaire at Bruges to study ballistics. A year later he entered the École Supérieure de Guerre, graduating in 1892 with high honors, which led him to be appointed to the General Staff, the first Jewish officer to receive such an assignment.

Without any warning or any indication of what was to occur, Captain Dreyfus was arrested on Oct. 15, 1894, at the office of the Chief of the General Staff on a charge of treason. A letter, known thereafter as the "bordereau" and claimed to have been stolen from the German Embassy on August 16, was the basis of the charge. The letter dealt with the offer of certain documents of military importance to the German Government and was couched in terms that would hardly have been used by an artillery expert. Also it closed with the remark, "I am just off to the manoeuvres," which that year were not attended by the probationers, of which Captain Dreyfus was one.

Nevertheless, chiefly on the evidence of Alphonse Bertillon, who testified that the handwriting of the "bordereau" resembled that of Dreyfus, he was brought to the headquarters of the General

Staff and under pretext was asked by Major Du Paty de Clam to write a letter which proved to be identical with the "bordereau," the Major believing that he would give himself away when confronted with this evidence. Dreyfus remained calm, however, and Du Paty, finishing the experiment, arrested him for treason, and he was removed to the military prison of Cherche Midi. Although strongly protesting his innocence, he was kept *incommunicado* until December 5, when he was allowed to receive legal advice and write to his family. His trial, which began on December 19, lasted four days and was held in secret. After the judges had retired to consider the verdict, the Minister of War, Gen. Auguste Mercier, laid before them eight documents and a letter covering them. Only one of these related to Dreyfus, but because of the covering letter, all incriminated him. The document that had reference to him was decoded and had it been decoded correctly would have proved his innocence. By not admitting these papers to the defense, the judges violated Article 101 of the Code of Military Procedure. Dreyfus was found guilty of having delivered "to a certain foreign power or its agents, a certain number of secret or confidential documents concerning the national defense," and sentenced to public degradation and life imprisonment. The degradation was carried out on Jan. 5, 1895, on the parade ground of the École Militaire, Paris, when his insignia were ripped from his uniform and his sword broken.

On March 15, he arrived at the penal colony at Cayenne, French Guiana, until the prison at Devil's Island, of the Isles du Salut, could be made ready for him. Incessant heat and rain for five months of the year was the climate of the island that was to be his prison. In September, 1886, it was reported that he had escaped and, to prevent the actuality, the Government ordered him kept in strict seclusion.

During the time of his incarceration, his family had been making every effort to prove his innocence and to have the case reopened. Through the keenness of a stock broker (who was shown the "bordereau," and recognized the handwriting as that of a customer, one Maj. Walsin Esterhazy, an impecunious and ne'er-do-well member of an illustrious Hungarian family) and the interest and strong-mindedness of Lieut.-Col. Georges Picquart, head of the Military Intelligence (who in going over other papers recognized the handwriting of Esterhazy to be that of the "bordereau") as well as the interest of Senator Scheurer-Kestner, the case was again brought before the public. On Nov. 15, 1897, Mathieu Dreyfus published an open letter to General Billot, who had succeeded General Mercier at the War Office, denouncing Major Esterhazy as the criminal and repeating his brother's innocence. On January 10-11, 1898, Esterhazy was court-martialed, but threatening to involve his superior officers, was unanimously acquitted. Then Colonel Picquart was arrested and imprisoned on the charge of giving out information received in official documents.

On Jan. 13, 1898, there appeared in *L'Aurore*, then edited by Georges Clemenceau, a letter entitled "J'accuse" by Émile Zola in which he denounced the condemning of an innocent man and the freeing of a guilty one. The War Ministry, alarmed at the turn of events, went before the Chamber of Deputies with a "dossier" of secret charges to prove Dreyfus's guilt. Colonel Picquart denounced them as forgeries, naming Lieu-

tenant-Colonel Henry as the forger. The latter confessed and was arrested, but before he was brought up for trial committed suicide.

The case now assumed the proportions of a *cause célèbre* and a national scandal, and it was referred to the Supreme Court for review. This Court, after hearing all the evidence, ordered the findings of the court-martial of 1894 abrogated and a new trial. Dreyfus was returned to France and put on trial at Rennes on Aug. 7, 1899. In view of the Court of Cassation's action, the public was amazed when he was again found guilty by a vote of five to two. President Loubet pardoned him, but Dreyfus wanted complete vindication, so for seven long years the agitation dragged on. Again the Supreme Court entered the case and finally annulled all previous proceedings and proclaimed Dreyfus innocent. Bills were introduced into the Chamber of Deputies for the restoration of Dreyfus and of Colonel Picquart, who had sacrificed his career by his stand, to the military positions they would have won had they never been persecuted. On July 12, 1906, Dreyfus was created a knight of the Legion of Honor. He was reinstated in the army as a Major, and assigned to an Artillery regiment at Vincennes. After serving for two years he retired into the reserves. During the World War he was brevetted a brigadier-general and put in command of one of the forts of Paris. At the close of the War he was made commander of the Legion of Honor. Dreyfus then retired to private life.

In 1908, while attending ceremonies in honor of Zola at the Pantheon, he was slightly wounded in the arm by an anti-Semitic fanatic. In 1930, he was a member of a committee of French intellectuals which drew up a petition interceding on behalf of Sacco and Vanzetti and forwarded to Massachusetts officials.

The Dreyfus affair grew through a wave of anti-Semitism that swept over France and the desire to avoid a military scandal, and the outcome was hailed as a great triumph over militarism in France.

DROUGHT, THE. See AGRICULTURE; LIVESTOCK; DUST STORMS.

DUANE, WILLIAM. An American physicist, died at Devon, Pa., Mar. 7, 1935. Born at Philadelphia, Feb. 17, 1872, he was graduated from the University of Pennsylvania in 1892. As holder of the Tyndall fellowship he studied at the Universities of Berlin and Göttingen, receiving the degree of Ph.D. at Berlin in 1897, his thesis being published by the Imperial German Government. On his return to the United States in 1898, he accepted the post of professor of physics at the University of Colorado, holding it until 1907, when he was invited to join Pierre and Marie Curie in their Radium Research Laboratory in Paris. He remained with them for five years, returning to the United States in 1913 to become assistant professor in and fellow of the cancer commission at Harvard University. In 1917, the chair of biophysics at the University was created for him. He retired in 1934 because of ill health.

At the Collis P. Huntington Memorial Hospital, supported by the commission for the study of malignant diseases at Harvard, Dr. Duane was supervisor of the use of radium and X-rays, and as such, devoted considerable research to developing a new type of X-ray for the treatment of cancer, as well as aiding in the development of the methods of using radium and the X-ray. He designed machinery used in hospitals for the preparation of

the radioactive substances and originated important methods of using them. To him can be credited the generating machine used in the treatment of cancer, for it was largely through his efforts that it came into use. It is a machine of high power with relatively heavy output of short wave-length rays and with steady rather than fluctuating voltage. Dr. Duane also made many important researches in the field of physics, especially in relation to biological phenomena and electricity. His chief scientific contributions relate to the structure of matter and the mechanics of radiation, particularly to the so-called quantum relations.

For his researches in connection with X-ray and radio-activity, Dr. Duane was awarded the John Scott medal and premium (\$800) in 1922; the National Academy of Sciences' Comstock Prize of \$1500 in 1923, and in the same year, the first Leonard Prize of \$500 by the American Roentgen Ray Society. He was a member of several scientific organizations, including the American Society for Cancer Research, of which he was president in 1923-24, and had contributed many articles on the subject of his researches to technical journals.

DUISBERG, dūs'bōrk, CARL. A German chemist and industrialist, died at Leverkusen, Germany, Mar. 19, 1935. He was born at Barmen, Germany, Sept. 29, 1861, and educated at the Oberrealschule at Elberfeld, and from 1879 to 1884 studied at the universities of Göttingen, Jena, Munich, and Strasbourg. His thesis for the doctor's degree at Jena attracted attention and led to his becoming an assistant in the university's chemical laboratory. For a time he worked with Prof. Hans von Pechmann at Munich, where he discovered benzopurpurin and benzozurin. He gave up his scholastic career to enter the chemical laboratories of Fried. Bayer & Co., at Elberfeld in 1888, and out of his small laboratory grew the vast chemical works of I. G. Farbenindustrie A-G. In addition to red dyes, which dyed wool without having first to be steeped in caustic, he discovered various other pharmaceutical products that added greatly to the fame and prestige of his firm.

From the beginning of the 20th century, he advocated the establishment of a comprehensive chemical trust to do away with wasteful and destructive competition. In 1904, the first step in this direction was taken when Badische Anilin-und-Sodafabrik Farbenfabrik vorm. Fried. Bayer & Co. and the A.-G. für Anilinfarben-Fabrikation entered into a community of interests. He was made managing director in 1912, and in 1915, under the stress of War conditions, saw his dream finally realized when five other chemical firms joined, forming the I. G. Farbenindustrie (Community of Interests) of the German Coal Tar Industry. Ten years later the firms merged into one single organization, the I. G. Farbenindustrie A-G., of which Duisberg was appointed chairman of the board. This organization controlled 80 per cent of the world's chemical production and had a capital of 1,000,000,000 marks. It made many experiments with poison gases and artificial rubber, and discovered a new anæsthetic called *averin*, which from 1930 was used in place of ether. In 1926, together with representatives of British and German industries, Duisberg established an "economic Locarno," and took part in several conferences concerning an industrial "entente."

At the 8th International Congress of Applied Chemistry held in Washington in 1912, Duisberg lectured and exhibited a tire made of synthetic rubber, but said that the making of such rubber

for general consumption had not yet been achieved. He was the recipient of many honors throughout the course of his career, and in 1904 was made a Professor by the State. He was awarded the Bunsen gold medal, being one of the few men ever to receive it, and the W. Hoffman silver medal.

As a great industrial leader, he wielded great power in post-War Germany, and although an active supporter of the new Republic, he opposed government control of industry and warned against short-term credits. He firmly believed in the reduction of German war debts and felt that this would serve as a stimulus to trade throughout the world, thereby alleviating financial distress. His interest in scholarship was great and he founded academic associations for the assistance of the universities and the students. He gained worldwide achievement for his qualities of organizer, scholar, economist, and inventor. His unusual talents made him undisputed leader of German industry, having succeeded in creating an enterprise which established the reputation of German dyes throughout the world.

DUKAS, du'ka', PAUL. A French composer, died in Paris, May 17, 1935, where he was born on Oct. 1, 1865. He was educated at the Lycée Charlemagne and at the Paris Conservatory studying under Mathias, Th. Dubois, and Ernest Guiraud. In 1888 he was awarded the second Prix de Rome for his cantata *Velleda*. Having to perform his military service, his studies were interrupted for a year, and it was not until 1892, when his overture to *Polyeucte* was performed at one of the Lamoureux concerts, that his music came into prominence. His musical interpretation of Racine's tragedy met with approval despite the popularity of Wagner at that time.

In 1896, he composed a symphony in C major and followed it with his best known work, *The Sorcerer's Apprentice*, written in scherzo form and strikingly original. This he conducted himself at the Société Nationale de Musique in 1897, and it was played in May, 1899, at the London Musical Festival. He was regarded as one of the leaders of the French school, second perhaps only to Debussy, whose admirer he was. In 1921 he wrote *La plainte au loin du faune* and dedicated it to the master. His works also include a symphony and two overtures, *King Lear* and *Gott von Berlichingen*. His opera, *Ariane et Barbe bleu*, based on Maeterlinck's fantasy, was first performed in Paris in 1907 and scored a great success. It was heard in Austria in 1908; Italy, 1909; and the United States, at the Metropolitan Opera House in New York, in 1911.

In 1909, Dukas was appointed to the Conservatory, teaching orchestration for three years, and in 1926 he was appointed professor of composition at the École Normale de Musique in Paris, two years later being made director of the Paris Conservatory. He also wrote the ballet, *La Peri*, produced in Paris in 1911 with the Russian danseuse Trouhanova, and the ballet, *Fantaisie chorégraphique* in 1928. Together with Saint-Saëns he completed and orchestrated Guiraud's opera, *Fredegonde* (Paris, 1905). His appreciation of and interest in the great harpsichord composers led him to edit a number of the works of Rameau, Couperin, and Scarlatti.

Not only was he a successful composer but he was a capable music critic as well, and contributed articles on music to *La Revue Hebdomadaire* and the *Courrier Musical*. Of his work, a French critic has written that it shows "an unquenchable thirst

for rhythm. . . . Though modern, his music escapes the unrest of our day. There is none more serene, in spite of its prodigious life."

DUKE UNIVERSITY. An institution of higher education in Durham, N. C., which, having its origin as York Academy in 1838, was expanded in 1858 into Trinity College and in 1924, through benefactions from James B. Duke, into Duke University. The enrollment for the autumn of 1935 was 3214. The faculty numbered 337. The endowment funds amounted to approximately \$30,000,000. The library contained approximately 420,000 volumes. President, William Preston Few, Ph.D., LL.D., Litt.D.

DUPRENE. See CHEMISTRY, INDUSTRIAL AND APPLIED.

DUST STORMS. The transportation of top soil by the wind has been a somewhat common phenomenon in the Great Plains States ever since the beginning of cultivation there by the white man. Naturally, this phenomenon is more frequent in relatively dry years than in wet ones. While these dust storms of the past had always caused inconvenience, especially to housewives, it was seldom, if ever, that serious property damage resulted from them until the year 1933. Of course, droughts always cause damage, varying from slight to severe, to growing plants; hence during dry weather the agricultural interests always suffer. Moreover, in long continued droughts, towns and cities may have to incur unusual expense to maintain their water supply. But before dust storms can take place, there must be strong winds in addition to the dry weather, and for this soil blowing itself to cause damage, it must be on a large scale. The damage from dust storms during 1934 was greater than that of 1933, while that in 1935 far exceeded either of the previous two years.

The dust storms were the result of three contributing factors: first, the prolonged dry weather with many consecutive months of little or even scanty rainfall; secondly, unusually high winds; lastly, cultivation which even while the crops are in their most vigorous growth leaves the soil with relatively weak roots to bind its particles together as compared with the strong root growth of the virgin sod, while during the preparation of the soil for crops there are no roots at all and the bare soil is completely exposed to the wind. When there are no growing crops a reasonable supply of moisture is sufficient to prevent the wind from blowing the soil, but with dry weather there is invariably some blowing of soil which is not covered with plants. With prolonged dry weather, even growing crops sometimes wither and die thus leaving the soil exposed to the wind.

That portion of the United States which suffered most during 1935 from the loss of soil as the result of wind was in southwestern Kansas, southeastern Colorado, northeastern New Mexico and the adjacent portions of Oklahoma and Texas. While this region was the one most affected, neighboring portions of these States as well as parts of Wyoming, Nebraska, and North and South Dakota also suffered from soil erosion by wind. The soil removed from these districts was carried by the wind to all parts of the United States east of the Rocky Mountains. However, along the Atlantic seaboard the transported dust was never quite so noticeable during 1935 as in May, 1934 (see THE NEW INTERNATIONAL YEARBOOK, 1934, the article on METEOROLOGY).

The extent to which these dust storms affected places not in the regions from which soil was re-

moved by the wind is exemplified by the conditions at Topeka, Kans., on March 20. Here the visibility was less than 300 yards during the middle of the day; the sun was entirely obscured by dust, and artificial light was necessary for reading. Dust covered sidewalks and streets, and on the following morning pedestrians and vehicles left tracks almost as plain as if in newly fallen snow.

Dust storms occurred during each of the first five months of 1935; they were least severe during January and May. During March, beyond any reasonable doubt, dust storms were more numerous and more severe than in any previous month in the recorded history of the United States. Those of April were more numerous and severe than those of March. The great frequency with which dust storms were observed is borne out by the case of Texas. During March there were only three days when dust blowing was not observed somewhere in that state, while during April there were only two.

The effects of the dust storms were exceedingly varied. In many fields the soil was blown away to the depth of as much as one foot; in these cases it will be impossible to cultivate the soil for several years. In other cases the top soil was blown away only to the depth of a few inches; and in even less severe cases, reseeded crops was all that was necessary in order for the farmers to get crops during the year. Cherry orchards in the rich agricultural section between Fort Collins and Loveland, Colorado, suffered severely when the freshly plowed soil was swept away leaving roots of the trees bare.

Many pastures were so covered with dust as to render them unfit for grazing. Where the dust was not quite so deeply deposited on the pastures, the livestock suffered greatly from eating so much dust with their feed; many cattle died from this cause. The same trouble resulted from dust that drifted into haystacks, and in some sections dead stock lying along roads was a common sight. Livestock also died from suffocation. One of the worst dust storms took place in southwestern Kansas on April 14; on this day it became so dark that chickens went to roost before three o'clock in the afternoon.

Drifts were very common. In many places the drifted dust was 6 feet deep. A few drifts 9 feet in depth were reported in New Mexico. This drifting of the dust delayed traffic of all kinds. Not only was traffic delayed by drifting, but also as a result of reduced visibility and other causes. The railroads engaged in a spectacular fight against the "black blizzard," and succeeded in maintaining service to a more satisfactory extent than any other form of transportation. Despite the frequent low visibility and great difficulty of keeping the tracks free from drifts, there were no serious accidents, although delays were somewhat numerous and equipment (particularly locomotives) suffered severely. The new air-conditioned passenger cars functioned quite satisfactorily. On the worst days of dust storms most automobilists used headlights in the middle of the day. Other automobilists were unable to get their cars started because the ignition system was rendered useless by the static electricity which accompanied the worst storms; many motorists were thus left temporarily stranded. The static electricity, generated by friction among the dust particles in the air, was at times so intense that electrical shocks were received when one came in contact with any metal part of a car. Even where the dust was not greatly pronounced, the

cylinder walls of engines in automobiles driven through dust storms were badly damaged and in some instances a new engine was necessary. Aviators reported dust at altitudes as high as 20,000 feet.

Suffering and discomfort from these dust storms were intense. Schools were closed temporarily in many localities as a measure of safety, and many ranch homes were deserted by their tenants. Artificial light was used during mid-day. In some of the worst storms it was necessary to breathe through wet cloths or towels. Some residents hung wet blankets over their doors and windows. In some localities dust settled in buildings of all kinds; floors and furniture were covered with a thick film of powdery dust. Many persons were lost within 100 yards of their homes during the very worst storms, on account of the greatly reduced visibility. A dust storm which occurred over a large part of Kansas on March 15 was unusually severe at Alton, Kans.; during much of that night the street lights could not be seen from across the street.

The persistence of fine dust particles in the air had a detrimental effect on health, and on the morale of those who were forced to live and work in the continually dust laden atmosphere. The death rate from pneumonia and other respiratory diseases increased markedly. The Red Cross volunteer workers made dust masks by the thousands and distributed them to persons in the affected areas. Emergency hospitals for the treatment of dust victims were established.

DUTCH EAST INDIES. See NETHERLAND INDIA.

DUTCH ELM DISEASE. See ENTOMOLOGY, ECONOMIC; FORESTRY.

DUTCH GUIANA. See SURINAM

DUTCH WEST INDIES. See CURAÇAO; SURINAM

EARTHQUAKES. Estimates as to the actual number of earthquakes which are felt in some part of the world during each year differ widely, partly because seismological observatories are not regularly distributed over the earth's surface. A. Sieberg has estimated that 9000 earthquakes take place each year and his estimate is considered reliable by many seismologists. Fortunately the vast majority of quakes are either feeble and harmless, or else occur under the sea or in thinly populated regions. However, C. Davison has estimated that in an average year 14,000 persons are killed by earthquakes. Heavy quakes often occur in remote regions and are known to have happened only from the records made by seismographs over the globe, even in some populated regions direct news is sometimes weeks or months in reaching the rest of the world. In the United States alone, more than 200 earthquakes are usually reported annually.

On April 21 the most destructive of recorded earthquakes in Formosa took place in the northwest part of that island. About 3200 persons were killed and 9000 injured; also about 19,000 houses were destroyed, and others damaged. The epicentre was in the upper reaches of the Koryuki River, 25 miles northeast of Taichu. The area of greatest damage was 50 miles long and 25 miles wide, running from Taichu to the outskirts of Taihoku and parallel to the west coast. This shock occurred in a district where earthquakes have been infrequent during the present century. The principal earthquake zones of Formosa are those of Kagi in the central part and Karenko and Giran on the east coast. To the Kagi centre belonged the earth-

quake of 1906, the last great quake in Formosa and, except for the recent (Taichu) quake, the most destructive one in the history of Formosa.

On May 31 an earthquake took place in Baluchistan which almost destroyed the cities of Quetta, Mastung, and Kalat. The epicentral area of this quake was roughly parallel to the main structural lines of the eastern part of Baluchistan, which run from SSW to NNE; the zone of destruction was about 130 miles long and 20 miles wide at its greatest width.

This region of Baluchistan is one that is frequently disturbed by earthquakes. Destructive earthquakes occurred there in 1892, 1909, and 1931. The quake of 1892 damaged an area parallel to and about 45 miles to the west of the recent (Quetta) earthquake and was associated with a prominent fault known as the great boundary fault; that of 1931 damaged an area parallel to and about 50 miles to the east of the recent earthquake.

The destruction of Quetta was almost complete. Landmarks of all kinds disappeared and the city was left a widespread mass of debris. An official report gave the number of killed in Quetta as 26,000 out of a population of 40,000. In addition to the towns of Quetta, Kalat, and Mastung, at least 100 villages were totally destroyed, and the number killed in them was estimated at 12,000. The total number of deaths was probably about 40,000. So impossible was it to excavate the dead bodies in Quetta that all the survivors were removed in fear of outbreak of disease and the city surrounded by barbed wire entanglements and guarded to protect the property of survivors from marauding tribesmen.

Strangely enough, the recent quake was not a severe one. Although there was great loss of life, road and rail communications were not damaged; trees, lampposts, and most telegraph poles remained standing and in areas of excessive damage to native buildings the few buildings that were earthquake proof remained intact, not even their chimneys falling.

The great loss of life and destruction of property was not at all due to the intensity of the earthquake but rather to the poor quality of the buildings, the construction of earthquake-proof houses having been generally neglected. Quetta lies in an upland valley, 5500 feet above sea level and, owing to small rainfall, houses in the villages of this valley are built of unbaked bricks with mud mortar, a proper mortar rarely being used. In the towns, bricks or limestone blocks are used for the better buildings, but even here mud mortar is used.

Other destructive earthquakes, but less remarkable than the ones above described, occurred as follows. On January 4 at Istanbul and other places near the Sea of Marmara, Turkey, in which 40 persons were killed; on April 11 in northern Persia where 480 persons were killed; on May 1 near Kars on the Turco-Russian border where 600 deaths resulted; two near Tovildolinsky in the republic of Tajikistan (U.S.S.R.) near the Afghanistan border, one October 11 and another six days later, which killed 150 persons; and the ones at Helena, Montana, during October. See MONTANA.

The quakes of October 11 and 18 at Helena were rated 7 and 8 respectively on the modified Mercalli intensity scale. In comparison, the last disturbance of appreciable strength in this region, which occurred July 27, 1925, was of intensity 8. During the week between these two shocks a dozen or more of intensity 4 to 5 occurred and probably 200 of intensity 3 or less. The heaviest shock (Oc-

tober 18) caused but little damage to well constructed buildings. In general buildings stood up remarkably well; modern brick and stone residences suffered little loss. Much damage was done to an old school building and to commercial buildings that lacked steel or concrete frames; many of these buildings were of poor construction. About 100 brick and stone residences of old and poor construction were made uninhabitable. No damage was done to gas or water lines, but telegraph, telephone, and electric light service were interrupted about an hour. There was no loss from fire. Two deaths occurred and the property loss was estimated at \$2,000,000. Public order was easily maintained. See SEISMOLOGY.

EASTERN LOCARNO. See FRANCE, GERMANY, ITALY, UNION OF SOVIET SOCIALIST REPUBLICS, POLAND, CZECHOSLOVAKIA, LITHUANIA, LATVIA, and ESTONIA under *History*.

EAST PRUSSIA. A province of the German State of Prussia from which it is geographically separated by the Polish Corridor. Area, 15,061 sq. miles; population (June 16, 1933), 2,333,301.

EAST RIVER VEHICULAR TUNNEL. See TUNNELS.

ECOLOGY. See BOTANY; ZOÖLOGY.

ECONOMIC ASSOCIATION, AMERICAN. An organization founded at Saratoga, N. Y., in 1885 to encourage economic research, especially the historical and statistical study of the actual conditions of industrial life, to issue publications on economic subjects, and to encourage perfect freedom of thought and discussion upon current problems from an economic point of view. The membership in 1935 totaled approximately 3700. The annual meeting of the association was held in New York, N. Y., Dec. 26-28, 1935. Among the topics discussed were "Recovery, 1933-35: Distinguishing Characteristics"; "The Problem of Rigid vs. Flexible Prices"; "A Fifty-year Perspective in Economic History"; "Capital Formation"; "Problems of an Integrated System of Unemployment Relief"; "Prospects for International Trade in American Farm Products"; "America's Power to Produce and Consume"; "Equivalents for Value Theory in a Collectivist Economy"; "Effect of New Deal Legislation on Industrial Relations." The official journal is the *American Economic Review*, a quarterly. The officers in 1935 were: President, John Maurice Clark, Columbia University; vice presidents, Frank H. Knight, University of Chicago, and Willard L. Thorp, Washington, D. C.; counsel, John E. Walker, Washington, D. C.; and secretary and treasurer, Frederick S. Deibler, Northwestern University.

ECONOMICS. See BANKS and BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; LITERATURE, ENGLISH and AMERICAN; PUBLIC FINANCE.

ECUADOR. A South American republic. Capital, Quito.

Area and Population. Due to the fact that the frontier with Peru is not definitely settled, the area is variously estimated at from 275,936 to 337,304 square miles, including the Galapagos Islands in the Pacific (3028 square miles). No exact census has ever been taken. The estimated 1934 population was about 2,600,000. Approximate populations of the principal cities in 1933 were: Quito, 107,192; Guayaquil, 126,717; Cuenca, 43,542; Riobamba, 22,427. Whites comprise about 10 per cent of the population; Indians, 39 per cent; mixed, 41 per cent; Negroes and others, 10 per cent. Living births in 1933 numbered 103,525; deaths, 58,175; marriages, 14,270.

Education. Elementary education is nominally free and compulsory, but large masses of the population are illiterate. In 1934 there were 2336 primary schools, with 172,046 pupils; 21 secondary schools, with 3663 pupils; and four universities (at Quito, Guayaquil, Cuenca, and Loja).

Production. While agriculture supports about 90 per cent of the population, mining is important from an export standpoint. About 11,480,000 acres are under cultivation. Cacao, the chief money crop, has suffered from the witchbroom blight. Cacao exports in 1934 totaled 19,031 metric tons (10,580 in 1933). Other leading crops were coffee (exports, 31,582,368 lb. in 1934), rice (production, 68,445,000 lb. in 1934), bananas (1,452,231 bunches exported in 1934), oranges, sugar (production, 20,000 metric tons in 1934), tobacco, and other fruits. The forests yield ivory nuts, hat straw, rubber, kapok, and cinchona bark. Wool production in 1934 was 700 metric tons.

The chief mineral products in 1934 were: Petroleum, 235,000 metric tons (230,000 in 1933); gold (exports), 17,964 kilograms of cyanide precipitates; silver (exports), 533 kilograms. Manufacturing industries in 1934 had an invested capital of 51,092,000 sucres, an output valued at 61,288,000 sucres, and 9050 workers. The leading industries, by value of output in 1934, were textiles, shoes and leather, breweries, tobacco products, petroleum refining, and sugar refining.

Foreign Trade. Excluding bullion and specie, imports in 1934 totaled 61,773,000 sucres (31,862,000 in 1933) and exports were 102,471,000 sucres (44,282,000 in 1933). Of the 1934 imports the United States supplied 32.8 per cent by value (31.6 per cent in 1933); Japan, 14.1 (3.2); Great Britain, 13.0 (16.8); Germany, 11.5 (14.3). The United States purchased 41.8 per cent of the 1934 exports (49.3 in 1933); France, 20.6 (13.8); and Japan, 0.6 per cent (0.4). The principal 1934 exports by value were: Cacao, 27,165,459 sucres; coffee, 20,656,004 sucres; gold ore, 18,905,566 sucres; crude petroleum, 12,901,987 sucres; ivory nuts, 4,871,504 sucres. Cotton textiles, foodstuffs, metals and manufactures, and chemicals were the chief imports.

In 1935 imports totaled 97,094,000 sucres; exports, 113,498,000 sucres. Exports to the United States were valued at \$3,265,832 (\$3,098,648 in 1934) and imports from the United States, \$2,842,962 (\$2,342,613).

Finance. Total government revenues in the calendar year 1934 were 46,575,000 sucres (41,842,000 in 1933), while expenditures were 43,588,000 sucres (41,842,329 in 1933). For 1935 the budget estimates placed government receipts at 63,500,000 sucres and expenditures at 63,600,000 sucres, excluding extraordinary credits of 2,100,000 sucres.

On Jan. 2, 1934, Ecuador's total foreign debt, including interest in arrears, was reported at \$25,749,425, the internal debt was 34,671,910 sucres (\$3,175,947), and the floating debt was estimated at 938,279 sucres (\$85,946). Service of the foreign debt was suspended in April, 1931. The gold standard was abandoned Feb. 9, 1932. The average exchange rate for dollar sight drafts during 1934 was 10.94 sucres. The par value of the sucre was \$0.20.

Communications. Ecuador in 1934 had about 700 miles of railway lines in operation, 2712 miles of highways (trunk roads, 1591 miles), and a number of navigable rivers. The coastal cities are touched by the inter-American airways network. In 1933, 275 steam and motor vessels entered Guayaquil, the chief port.

Government. The Constitution of 1929 vests executive power in a president elected by popular vote for four years. The legislative branch consists of a Senate of 32 members and a Chamber of Deputies of 56 members elected by literate male and female citizens who are at least 21 years of age. President at the beginning of 1935, José María Velasco Ibarra (Liberal), who assumed office Sept. 1, 1934.

History. The struggle for power between the executive and Congress, which had kept Ecuador in the throes of political agitation since the establishment of a constitutional régime in 1929, continued with undiminished violence in 1935. On August 20, President Velasco Ibarra was overthrown by the army after he had issued a proclamation dissolving Congress and attempted to establish a dictatorship. He was the fourth legally elected president ousted or disqualified by Congress since 1931.

Although the President was formerly presiding officer of the Chamber of Deputies when that body ousted his predecessor, President Martínez Mera, he came into conflict with Congress almost from the beginning of his administration. Like previous executives, he found that the government was unable to function due to Congressional obstruction and consequently strove to reduce the power of the legislative chambers. A plot against the government, led by former Provisional President Larrea Alba, led to the latter's deportation in February, 1935. As the year progressed, President Velasco Ibarra gradually extended his powers. He imprisoned many opponents both within and without Congress, established a press censorship, and formed a semi-Fascist organization, known as *Acción Cívica*, to support his policies. Early in August the opposition won control of the Senate, electing two of their leaders as president and vice-president, respectively, of that body. With the government claiming a majority in the lower house, a deadlock ensued which the President sought to break on August 20 by dissolving Congress and calling new elections. The military immediately forced him to resign.

The army replaced Velasco Ibarra, who was exiled to Colombia, with Antonio Pons, another Liberal. The latter proceeded with plans for a Congressional and presidential election, but finding himself at loggerheads with Liberal factions in Congress, suddenly resigned on September 26. He declared that factionalism among the Liberals made a Conservative victory in the elections practically certain. The army immediately established a military dictatorship under Federico Páez, Minister of Public Works. Congress was dissolved, the elections fixed for October were cancelled, and the leaders of the Conservative party were either imprisoned or exiled from the country. The new Provisional President announced that a constitutional assembly would be convened to revise the Constitution, the indications being that the powers of Congress would be sharply curbed. In announcing the appointment of his cabinet on October 2, Provisional President Páez decreed a pay increase ranging from 10 to 25 per cent for army officers and privates.

The Páez régime early came into conflict with the Roman Catholic Church which was closely aligned with the Conservatives. On October 1 a Jesuit superior was arrested in Guayaquil and on October 15 decrees were issued nationalizing the church and the clergy. Foreign priests and ministers were ordered to terminate their ministrations

within six months, while the churches and other religious edifices were declared state property. Coincident with the issuance of these decrees the Socialist party announced its full support of the dictatorship and promised to take up arms in its defense in the event of a Conservative revolt.

The problem of regulating foreign exchange transactions continued to present difficulties to the government, although the favorable balance of trade made it possible throughout most of the year for importers to obtain without delay the needed exchange to pay for their foreign purchases. Exporters were required, however, to deliver 25 per cent of the value of their bills to the Central Bank. The exchange thus obtained was used to liquidate commercial obligations incurred prior to the exchange control law of Nov. 27, 1933. It was estimated that these obligations were fully liquidated by the end of 1935. With the improvement of conditions the exchange control law of Nov. 27, 1933, was revoked by the executive decree of Oct. 7, 1935.

Tension with Peru. During November the long-pending frontier dispute between Ecuador and Peru, involving particularly the territory comprised between the old and new channels of the Zarumilla River, reached a critical stage as a result of mutual charges of violations of the *status quo* agreement reached in 1933. Both countries sent additional troops to the region in dispute and the press in Quito and Lima indulged in heated recriminations. On November 29 the Peruvian Foreign Office announced that it had invited Ecuador to submit the dispute to the Permanent Court of International Justice at The Hague. The Peruvian invitation was based on Article XIII of the Covenant of the League of Nations. Although both countries were members of the League, they had agreed by the Ponce-Castro Protocol of June 30, 1924, to submit their dispute to an arbitral decision by the President of the United States in case direct negotiations failed. Direct negotiations for a settlement of the boundary issue were in progress in Washington between plenipotentiaries of Ecuador and Peru when the tension along the frontier developed.

EDUCATION IN THE UNITED STATES. Statistics. Attendance. The latest reports from the United States Bureau of Education are for the school year 1933-34 and are complete for only 41 States. Comparisons of enrollments in these States for 1931-32, and for 1933-34 show that the total enrollment in the schools increased by only 0.3 per cent. Considering only the kindergarten and eight elementary grades there was a decrease of 1.6 per cent. In the high schools there was an increase of 8 per cent.

The greatest per cent of decrease was 10.8 in the kindergarten and the greater increases were in the upper years of the high school. The number of postgraduates increased from 30,273 to 51,412, making a difference of 70.4 per cent.

The table in column two shows the enrollment of pupils by grades in 41 States for 1931-32 and for 1933-34.

Expenditures. In the 41 States that reported to the United States Office of Education for 1933-34, the expenditures for current expenses decreased by 18.3 per cent from 1931-32 to 1933-34. Expenditures for capital outlay in these same States decreased 68.4 per cent. Expenditures for interest decreased 9.6 per cent.

The total amount paid for salaries of teachers, principals, and supervisors in 1932 was \$1,265,443,-

Grade	Enrolment 1931-32	Enrolment 1933-34	Percentage change
Kindergarten *	421,023	375,589	-10.8
First	2,741,762	2,610,923	-4.8
Second	1,911,334	1,804,503	-5.6
Third	1,822,543	1,789,689	-1.8
Fourth	1,767,165	1,759,632	-0.4
Fifth	1,671,364	1,644,665	-1.6
Sixth	1,547,420	1,556,565	+0.6
Seventh	1,383,544	1,464,016	+5.8
Eighth	1,116,811	1,143,415	+2.4
Total	14,382,966	14,148,997	-1.6
First year high	1,190,228	1,208,193	+1.5
Second year high	946,152	1,028,454	+8.7
Third year high	746,071	830,105	+11.3
Fourth year high	620,377	698,014	+12.5
Post graduate ^b	30,273	51,412	+70.4
Total	3,533,101	3,816,178	+8.0
Grand total	17,916,067	17,965,175	+0.3

* 29 States only. ^b 17 States only.

910. In 1934 the total was decreased to \$1,058,595,-297.

Teachers, Principals, and Supervisors. In the 41 States that reported there was a decrease of 10,387 teachers, principals, and supervisors or 1.7 per cent between 1931-32 and 1933-34. In the two years prior to 1931-32 the number of such officers had increased 6421 or 1.0 per cent.

School Buildings. Early in 1935 the United States Office of Education completed a survey of needed school-building construction throughout the country. Basing estimates upon the returns received from 24 State departments of education and half of the cities of over 2500 population in 45 States, the U.S. Commissioner of Education reported to Public Works Administrator Harold L. Ickes that there was immediate need for \$625,999,022. Meanwhile, more than half of the schools constructed during 1934 were financed from Public Works Administration allotments. Mr. Harry L. Hopkins, Federal Emergency Relief Administrator, reported in June that during the last year work projects on school buildings in the States and in Puerto Rico had been conducted to the extent of repairing and improving 30,188 school buildings, and 417 State college, State normal, and university buildings. A total of 1856 new school buildings and additions were built and 36 new State college and university buildings were constructed.

As regards the public schools, this is the largest outlay of funds for buildings ever recorded for a single year. In various places school buildings costing much more than the community could ordinarily afford have been constructed and equipped.

Loyalty Oath Laws for Teachers. During the year, educators have been deeply concerned with the movement to require from school teachers as well as those teaching in colleges and universities an oath of allegiance to the United States and to the State in which they work. Bills were introduced in sixteen States. In seven they were passed and became laws; in two, Delaware and Maryland, they passed the legislature but were vetoed by the governors; in seven other States the legislation was defeated. These States are Connecticut, Florida, Illinois, Iowa, Kansas, Pennsylvania, and Wisconsin.

In all there are 19 States now having laws requiring the "loyalty oath." These States and the dates when oaths became legal requirements are Arizona, 1935; California, 1931; Colorado, 1921; Georgia, 1935; Indiana, 1929; Massachusetts, 1935; Michigan, 1931; Montana, 1931; New Jersey, 1935; North Dakota, 1931; New York, 1934;

Ohio, 1919; Oklahoma, 1923; Oregon, 1921; South Dakota, 1921; Texas, 1921; Vermont, 1935; Washington, 1931; West Virginia, 1923.

Rhode Island has no law but requires through the board of education a loyalty pledge from all its teachers.

The usual form of the loyalty oath is as follows:

I do solemnly swear, or affirm, that I will support the Constitution of the United States, the constitution of the State of _____ and the laws enacted thereunder, and that I will teach, by precept and example, respect for the flag, reverence for law and order, and undivided allegiance to the government of one country, the United States of America.

In the New York Legislature, a bill was introduced which would have required all students in publically supported institutions to take a loyalty oath. It is generally held that only the vigorous action of the undergraduates in the colleges prevented the passing of the bill.

A resolution calling upon the States to enact loyalty oath laws was defeated in the House of Representatives at Washington.

There are influential agencies behind the introduction of such bills. Among these are the Daughters of the American Revolution and the American Legion.

Those who urge the bills believe that there is a very serious danger of the spread of communism and radicalism through the schools. By means of this oath they expect to "weed out the radical teachers and professors who preach communism and radicalism to our young."

There has been much opposition to the loyalty oath. Many have expressed their opinion that these laws represent a real threat against academic freedom. Colleges and universities have been concerned for "academic freedom" for the past several years, but this is the first time that this has become an important matter in the public schools. The public school teachers are not greatly disturbed over the taking of the oath. Their difficulties come when the meaning of the oath is interpreted by those who believe that youth should be kept in ignorance of the various schemes of government that differ from our own. Teaching about communism or Naziism is, in the judgment of teachers, a very different matter from leading the learners to adopt these forms. Yet this is the exact interpretation that some zealous advocates of patriotism have read into the law.

The causes that seem suddenly to have brought educators into suspicion on the part of the public are easy to understand. The mere existence of concern for the outcome of the schools' influence upon the learners implies a confidence in the possibilities that the school possesses.

This confidence in the power of education has been present in our country from its beginning. Different results have been expected from the schools in different periods in our history. At first public as well as private education had a pronounced religious emphasis. Children learned religious precepts as an important part of their regular school work. A considerable part of all the school's efforts was devoted to the task of teaching youth those skills that would enable them better to practice the accepted Christian virtues.

The teaching and learning in this period took place in the small schoolhouse which was an integral part of each community. Parents knew just what was happening in this school. No terms were used in the school that were not understood by those whose children were receiving instruction. The teachers were usually men who took part in

all of the community affairs and often were the leaders and guides in matters that concerned the common welfare.

In this period there was no concern for "academic freedom." The problem did not exist. The "little red schoolhouse" shared with the church and the homes the responsibility for developing the characters that citizens were expected to acquire.

When the colonies united to form the United States the dominant concern of the school changed and became political or patriotic. The religious aim still existed in education but it was no longer the only or even the most important end of school effort. The textbooks that were used were filled with patriotic sentiments. Boys and girls in the upper years read and recited the speeches that famous patriots had made and were expected to be fired with some of the zeal that had moved those who had thus spoken.

In this period, there was no problem regarding "academic freedom." Neither were schools in general under any suspicion of teaching disloyalty. There was still a close relationship between the school and the homes that supported it. Also those who taught were active in the affairs with which the public was concerned.

Following the Civil War the trend was increasingly toward industrial efficiency. By the beginning of the new century industrial subjects and industrial schools were common. Even small high schools offered elaborate training in commercial subjects which included stenography, typewriting, accounting and business law, and commercial practices. Business arithmetic and commercial geography were often added to the regular school work.

This change in the controlling aim of the school was accompanied by another change of even greater significance. The small schools with their intimate relationship with the homes had given way to large schools which often housed hundreds of children and employed a number of teachers. Under such conditions it was necessary to employ teachers who had no part in the management of the community in which they taught. Normal schools were training such persons for more efficient service, but such training often served to widen the lack of understanding between the public and the schools. The language of education became one not understood by patrons. Children were measured, tested, graded, and grouped by methods that parents did not understand. Mysterious terms such as "X, Y, and Z groups" and "opportunity classes" began to appear. It is no secret that educators used these terms to keep from those concerned the real significance of their procedure. This was not done for the purpose of deceiving children and their parents, but rather to prevent the difficulties that were certain to arise if they knew exactly what was happening. It was argued that for the "bright" child to know that his place in an "X" division indicated that he was superior intellectually would result in making him snobbish and conceited. In the same way, a child who was aware that he was in a "Z" division because he was mentally inferior would be discouraged. Among educators there have been many who have seriously questioned the advisability of such practices.

Whatever may have been the motives of educators in their conduct of the schools, in recent years a lack of understanding and consequent suspicion has resulted. This lack of confidence in educators is evident in the large number of State laws that

have been enacted within the past dozen years. Such laws prescribed not only what must be taught but also what must not be taught.

The movement to control the activities of the school has been coincident with the lack of understanding between parents and the school. The schools have been making determined efforts to remove this difficulty. Great numbers of schools have organized and fostered parent-teacher associations with two avowed purposes. One is to enable parents to understand what the school is attempting to accomplish and the other is to secure from parents their suggestions for improvements in the school programme. Educational week now generally observed in the schools is another attempt to reestablish an understanding between the schools and the community.

There are evidences that we may now be at the beginning of another period in the life of the schools. Just as the aims changed from religious to political and then to industrial, so now the aim seems to be changing to what may be characterized as social.

In many schools, even in the elementary grades, children are now considering problems that were not regarded as suitable for them, even five years ago. The subject of housing is now one of the most prominent topics in the public schools. The newer conception of the need to make education practical forces teachers to consider the problems that are of significance to the learners and to those with whom they are associated. Problems relating to labor and capital, various forms of government and proposed changes within our own government are certain to find their way into any modern classroom that aims to deal with existing conditions. Each problem of this nature invariably has partisan aspects. No matter how discreetly the teacher treats the questions raised, there is a large possibility of misunderstanding on the part both of the learners and of those outside the school who have no direct knowledge as to what does take place within the classroom.

Many even among educators have serious doubts regarding the sufficiency of knowledge possessed by the ordinary teacher to deal with complicated social problems that are often treated in schools.

It is the necessarily partisan nature of social problems and the lack of competent knowledge that teachers are supposed to have that leads directly to the attempts that legislatures have made to determine what may be taught and to the additional efforts that are now being made to make certain that teachers are loyal to the social order under which they now work.

The problem is a new one for the public schools. It is impossible to predict what the solution will be. It may happen that the Federal government will enlarge the scope of its control over different aspects of education just as it has in the past taken a large responsibility for vocational training and more recently has assumed virtual control over parts of nursery school education and the National Youth Administration movement.

School authorities are endeavoring to meet the issue in part by raising the academic and professional qualifications of teachers with the expectation of providing a larger supply of highly qualified persons. Everywhere also there are indications that the schools are increasing their efforts to cooperate with all agencies that are interested in the training of youth.

Any extension of this tendency to restrict the

freedom of teachers is certain to have important bearings upon the schools concerned.

Survey of Public Education in New York State. The Board of Regents of New York State are undertaking what promises to be the most comprehensive investigation of school affairs ever attempted in a State. Mr. Owen D. Young, one of the board, will serve as chairman of a special committee. He will be assisted by two other regents, William J. Wallin of Yonkers, and John Lord O'Brian of Buffalo.

The General Education Board has appropriated \$494,000 for the survey and the committee has selected a number of specialists who will conduct various parts of the survey.

The main divisions of the survey were stated by Mr. Young as follows:

- (1) Study of the financial problems of the system, including the examination of the present school district organization.
- (2) Study of elementary education with a view to re-evaluation of the curriculum and of the auxiliary services, including those for handicapped children, provided through the elementary schools.
- (3) Study of all types of education of the secondary level, whether general or vocational or designed for special groups of students, whether furnished by schools or other agencies, with a view of evaluating the appropriateness and adequacy of these provisions.
- (4) Study of the demands and provisions for adult education and higher education at public expense.
- (5) Study of the selection, training, quality, and standards of compensation of the teaching personnel, with a view to determining the future rôle of the teacher-training institutions.
- (6) Study of Federal aid to reveal the influence of existing Federal subsidies and regulations on the range and character of special types of education, and to determine the policy which the State should follow with respect to seeking or accepting Federal appropriations.
- (7) Study of the State Education Department with a view to determining the effectiveness of its organization and the desirable scope of its functions.
- (8) Revision of the education law.

The Julius Rosenwald Fund. The biennial report of this fund states that during the past two years the following projects have received aid: Negro education, \$330,000; Negro health, \$95,000; race relations and social studies, \$200,000; general education, \$120,000; library extension, \$100,000; medical services, \$190,000.

The Fund has under way a thorough exploration of rural education in the South. During the past year eight groups of "explorers," half white and half colored, have lived in various communities in Georgia, Arkansas, and Louisiana. They have made a careful study of all phases of country life. The results of these studies have been reported to a council on rural education. This council is composed of prominent persons interested in the general matter of education. These persons represent various parts of the country and meet in conference for several days two or three times during the year. In these conferences the reports of the field workers are submitted and discussed and further steps are determined.

EGGS. See LIVESTOCK.

EGYPT. A kingdom of northeastern Africa. Capital, Cairo. Ruler in 1935, King Fuad I.

Area and Population. Excluding the Anglo-Egyptian Sudan, Egypt has an area of about 386,000 square miles, of which only 13,600 square miles in the Nile valley are occupied. The estimated population in 1934 was 15,230,000, including 40,000 nomads (14,217,864 at the 1927 census). Births registered in 1933 numbered 668,467; deaths, 420,756. Estimated populations of the chief cities in 1931 were: Cairo, 1,200,000; Alexandria, 643,000; Port Said, 113,000; Tanta, 98,400; Mansûra, 73,300; Asyût, 60,000; Damanhûr, 57,500. Moslems

comprised 91 per cent of the 1927 population; Christians, 8.34 per cent; Jews, 0.02 per cent.

Education. About 88 per cent of the population was illiterate in 1927. The population of school age (5 to 19 years) in 1927 was 4,734,110; the school attendance in 1930-31 was 891,682. The State University at Cairo had 2222 students in 1932-33.

Production. The 8,597,500 acres devoted to crops and orchards in 1933 supported directly about 62 per cent of the total population. About 32 per cent of the cultivated land is devoted to cotton, the chief money crop. The cotton yield in 1934-35 was 748,548,000 lb. (849,406,000 lb. in 1933-34). Production of other crops in 1934 was: Wheat, 37,276,000 bu.; barley, 9,033,000 bu.; corn, 61,880,000 bu.; beans, 10,058,000 bu.; rice (rough), 24,887,000 bu.; onions, 563,432,000 lb.; sugar cane, 2,307,000 metric tons (1933). Livestock in 1933 included 912,000 cattle, 857,000 buffaloes, 1,345,000 sheep, 13,000 swine, 490,000 goats, 154,000 camels, and 753,000 asses. Fishing is an important industry. Mineral production in 1933 was (in metric tons): Petroleum, 237,725 (221,000 in 1934); phosphate rock, 440,632; manganese ore, 187; cement, 286,864.

Foreign Trade. Imports for consumption in 1934 were valued at £29,236,000 (£26,757,000 in 1933) and exports of Egyptian products at £31,048,000 (£28,104,000 in 1933). The United Kingdom supplied 22 per cent of the 1934 imports (23.1 in 1933); Japan, 11.8 (10.7); Germany, 7.3 (7.6); Italy, 7.0 (7.8). The United Kingdom took 32 per cent of the 1934 exports (40.1 in 1933); France, 9.7 (12.5); Germany, 9.1 (8.1); Japan, 8.9 (5.0); Italy, 8.1 (7.6). Leading 1934 exports were (in \$1000): Raw cotton, 76,424; cottonseed, 4518; cottonseed oilcake, 2292; onions, 1866; rice, 1818.

In 1935 imports totaled £32,233,000; exports, £35,604,000. Imports from the United States were \$10,474,396; exports to the United States, \$8,910,982.

Finance. Budget estimates for the fiscal year ended Apr. 30, 1936, were: Receipts, £32,846,000 (£31,662,000 in 1934-35); expenditures, £32,846,000 (£31,632,000 in 1934-35). Actual returns for 1933-34 were: Receipts, £32,630,000; expenditures, £30,549,000.

The public debt as of Oct. 31, 1934, totaled £97,009,860 (consolidated debt, £88,844,040). It was practically all held in England. The Egyptian pound, the unit of currency, fluctuated with the pound sterling at the constant ratio of 1 pound sterling equals 97½ per cent of the Egyptian pound. The average noon buying rates for cable transfers in New York was \$5.1652 in 1934, \$4.3439 in 1933, and \$3.5954 in 1932.

Communications. Egypt in 1933 had 2993 miles of railway lines (state, 2115 miles; private, 877 miles), which carried 45,924,000 passengers and 5,599,000 metric tons of freight, with gross receipts of £5,091,000. Highways extended about 4135 miles. From Cairo there was regular airmail and passenger service to Europe, India, and South Africa. The net register tonnage of vessels entering Egyptian ports in the overseas trade in cargo and with ballast in 1934 was 8,194,000 (7,360,000 in 1933). See SUEZ CANAL.

Government. The Constitution of Oct. 23, 1930, was abolished on Nov. 30, 1934, and Parliament was automatically dissolved (see 1934 NEW INTERNATIONAL YEAR BOOK, p. 206). A non-party cabinet under Mohammed Tewfik Nessim Pasha was formed Nov. 14, 1934, and the King and cabinet during 1935 exercised complete executive and legislative powers. See *History*.

HISTORY

Nessim Pasha's Rule. After three years of quiescence, the Egyptian nationalist movement centring in the Wafd (Nationalist party) erupted in 1935 in a determined and at times violent drive for a larger measure of independence. Commencing in November, a great wave of riots, student strikes, and popular demonstrations forced the restoration of the democratic Constitution of 1923 and the reopening of negotiations for a treaty settlement of the outstanding issues between Britain and Egypt. The basis for a nationalist resurgence had been laid late in 1934. King Fuad's confidant and controller of the royal estates, Ibrahim Zaki El Ibrashi Pasha, had been eliminated as the sinister power behind the throne; a new government had been formed by the liberal political leader, Mohammed Tewfik Nessim Pasha; and the autocratic Constitution of 1930 had been abolished by royal decree (see 1934 YEAR BOOK, p. 206).

Nessim Pasha's restoration of the freedom of speech and assembly, suppressed by his predecessors, enabled the Wafd to inaugurate its campaign for a return to power with a great political rally on the outskirts of Cairo Jan. 8-9, 1935. The rally was notable for the discipline and orderliness of the crowd of 30,000 persons gathered from all parts of Egypt and for the moderate and statesmanlike policies advocated by the Wafd leaders. The resolutions adopted called for the restoration of the 1923 Constitution, under which the Wafd had won overwhelming control of Parliament; urged the early settlement of British-Egyptian questions on a friendly and honorable basis; and unequivocally endorsed the leadership of Mustafa Nahas Pasha, the dominant personality in the Wafd movement.

For the time being the Wafd, controlling an unquestioned majority of the Egyptian voters, gave its friendly support to Nessim Pasha, who was engaged in a wholesale housecleaning and reorganizing of the government. Previous ministries, under the influence of the Palace, had filled governmental posts with corrupt and incompetent officials and created many new sinecures. Pending the completion of his reforms the Premier postponed consideration of the two all-important problems of a new constitution and new elections. Ruling by decree and without a Parliament, Nessim Pasha created a separate Ministry of Commerce and Industry in May; awarded a \$5,000,000 contract for reinforcing the Assiut barrage; canceled on May 2 the gold clause in all international financial contracts carried out in Egypt, thereby legalizing the payment of the government's obligations in depreciated paper currency; voted total credits of £36,000,000 on May 22 for a five-year programme of public works; imposed effective September 21 an additional ad valorem duty of 40 per cent on imports of Japanese cotton, rayon, and knit goods, which had been steadily replacing similar British products in the Egyptian market; concluded agreements with the principal mortgage institutions to lighten the burden of mortgage debtors; aided the peasants by distributing bounties for exports of certain farm produce; abolished the tax on cotton and reduced the stamp tax by 50 per cent; and reduced the annual fees paid by farmers who purchased government lands and other property. He also concluded a commercial agreement with Palestine and sent a delegation to England to initiate negotiations for an adjustment of Anglo-Egyptian commercial relations.

Nessim Pasha also completed the downfall of Ibrashi Pasha. Finding his efforts again obstructed by intrigues at the Royal Palace, he threatened on April 18 to resign unless Ibrashi were ousted. The British Residency lent its powerful support to Nessim Pasha's demand, and on April 22 the King agreed to remove his favorite, who was named Minister to Belgium. Meanwhile the arbitrary actions of the rector of the Moslem University of El Azhar in Cairo, an appointee of Ibrashi's, had created such unrest among the students that the ancient institution was closed for six months on April 10.

Effect of Ethiopian Crisis. The development in the early summer of the Anglo-Italian crisis precipitated by Mussolini's impending assault upon Ethiopia had immediate repercussions upon the political situation in Egypt. Apparently in response to the influence of the British High Commissioner, Nessim Pasha delayed longer than the Wafd leaders thought necessary in arranging for the promised restoration of constitutional government. With a possible war with Italy looming on the diplomatic horizon, the British were not anxious to be harassed by an aggressively nationalistic government in Egypt. The conservative elements in Egypt shared in these fears, recalling the violence and popular unrest stirred up during the period of Nationalist control over Parliament.

The resentment which had been accumulating against the Premier for his failure to restore the 1923 Constitution was thus shifted to the British Government. On June 27 the Wafd leader, Nahas Pasha, denounced Britain for blocking a return to the Constitution but at the same time announced that his party would continue to support Nessim Pasha's government. As the tension between Britain and Italy increased and an Italian army was massed in Libya, within 300 miles of Alexandria, Egypt became the focus of extensive British military and naval preparations. Alexandria became an important British naval base. British army and air forces in Egypt were greatly strengthened and the areas reserved for their use were extended. These measures aroused fear that if war broke out Egypt would again revert to its World War status as a British protectorate, without even a pretense of local autonomy. Much resentment was aroused by the charge that the British had taken their military measures in Egypt without consulting the nation or the government, although the British insisted that all their steps had been previously agreed to by Nessim Pasha. By the extreme nationalists the Premier was accused of being a pliant tool of British imperialism. They demanded that Egypt withhold its aid and cooperation until the British had accepted a treaty liquidating all the outstanding issues and establishing Egyptian independence on a permanent basis.

The moderates, following Nessim Pasha's lead, contended that Egypt's chances for independence would be greater if she extended loyal cooperation to Britain in the latter's hour of need than if the situation was used for hargaining purposes. In line with this policy the Egyptian Cabinet joined with the governments of Ethiopia and the Anglo-Egyptian Sudan in concluding the long-sought agreement for the construction of the Lake Tsana dam and the distribution of its impounded waters as released through the Blue Nile. Under this agreement, announced at Cairo June 1, Egypt was to bear 90 per cent of the cost of construction (estimated at \$10,000,000) and was to receive 90 per cent of the stored water (for details of the

agreement, see ETHIOPIA under *History*). On September 4 the Egyptian Cabinet approved the agreement with the Sudan Government for the distribution between the two countries of the Lake Tsana waters. On October 31 the Cabinet went even further in its cooperation with Britain. Although not a member of the League of Nations, the government announced that it would join the League powers in the application of economic and financial sanctions against Italy, basing its action upon the Kellogg-Briand Pact, of which both Italy and Egypt were signatories. This step provoked a strong protest and threats of retaliatory action from Italy.

Despite the strong criticism of Nessim Pasha aroused in the Egyptian press and extreme nationalist circles by his pro-British policy, the moderate leaders of the Wafd reiterated their support of him on October 23. On November 7 the British strengthened his position further by promising that there would be no change in Egypt's status in case of war and that they would withdraw their warships from Alexandria as soon as the crisis had passed. On November 9, however, the British Foreign Secretary, Sir Samuel Hoare, in a speech at London Guildhall made the maladroit confession that when consulted by Nessim Pasha the British Government had "advised against the reenactment of the Constitutions of 1923 and 1930, since the one was proved unworkable and the other universally unpopular."

Although Sir Samuel in another part of his speech denied that Britain opposed the establishment of a constitutional régime "suited to Egypt's special interests," his speech was regarded as proof that the London government had blocked the restoration of the 1923 Constitution, the achievement of which was the cornerstone of the Wafd's policy. The Wafd formally withdrew its support of Nessim Pasha on November 12 and the following day serious anti-British riots broke out in Cairo and Tanta during which the police fired into a crowd of students, killing two. Led by the aroused students, the anti-British demonstrations continued sporadically for nearly a month, with the death list rising to eight and the number injured to more than 300. The students literally forced the various political leaders to drop their personal feuds and ambitions and join in a united demand for the restoration of the 1923 Constitution.

On December 11 Nessim Pasha and his Cabinet agreed to resign, asserting that they could not carry on the government in the face of the nationwide demand for the old Constitution. The British and King Fuad then capitulated and on December 12 the King issued an imperial rescript restoring the 1923 Constitution. Nessim Pasha announced that he would retain the Premiership until after parliamentary elections were held. At the close of the year, the students and the Wafd were pressing him to hold the elections early in 1936 and were prepared to continue their anti-British agitation until a treaty of alliance had been signed on a basis of equality between Egypt and Britain. The draft treaty of 1930 was declared acceptable to the leaders of the Egyptian united front (see 1930 YEAR BOOK, p. 240).

See ETHIOPIA, GREAT BRITAIN, and ITALY under *History*.

ELECTION DISORDERS. See KENTUCKY. **ELECTRICAL ENGINEERS.** AMERICAN INSTITUTE OF. A national organization founded in 1884 for the purpose of advancing the theory and

practice of electrical engineering and the allied arts and sciences and of maintaining a high professional standing among its members. There are three grades of members: Associate, member, and fellow. The total membership on Oct. 1, 1935, was 14,623.

In 1935 there were 61 sections of the institute located in various cities throughout the United States and 117 student branches in colleges giving courses in electrical engineering. In addition to district, section, and student branch meetings there were held an annual winter convention in New York City, Jan. 22-25, 1935, and an annual summer convention in Ithaca, N. Y., June 24-28. Much of the institute's work is accomplished through its general and technical committees, of which there were 42 in 1935. Its principal publications are the monthly *Electrical Engineering*, the *Standards of the A.I.E.E.*, and the *Year Book*.

The officers elected for 1935-36 were: President, E. B. Meyer; vice-presidents, C. V. Christie, Mark Eldredge, R. H. Fair, W. H. Harrison, N. B. Hinson, F. O. McMillan, F. J. Meyer, G. G. Post, R. H. Tapscott, W. H. Timbie; treasurer, W. I. Slichter; secretary, H. H. Henline. Headquarters are in the Engineering Societies Building, 33 West Thirty-ninth Street, New York City.

ELECTRICAL ILLUMINATION. The movement for greater consideration of the human eye, known as "Better Light, Better Sight," which was started at the end of 1934 was pushed as a campaign of education. Special scientifically designed fixtures, both for desk and room lighting, were sponsored by the Illuminating Engineering Society, made by numerous different manufacturers and sold in many places at prices within the reach of the masses. Educational exhibitions were held in many places, including schools in small towns, with the end of teaching people that it was worth while to show consideration for the eyes in order that good sight may be retained in the later years of life. It was shown that although it is the present practice of using from 10 to 20 foot candles for reading and fine work, it would be still better to have 100 foot candles, properly distributed without glare, were it not too expensive. But this proved that although much improvement has been made in the last 10 years we are still far below the ideal.

The "Visibility Meter" is a new instrument for evaluating the ease or difficulty with which a piece of work or reading matter may be seen. It is in the form of a pair of binoculars through which the work may be viewed and in which are screens of varying density. These are rotated until the object is just discernible as in many of the popular exposure meters for photographers. One side indicates relative visibility and the other side indicates desirable illumination in foot candles.

In 1935 there were sold 410 million incandescent lamps of large sizes and 297 million of miniature sizes. Among the latter was a novelty in the way of a very small lamp about one-eighth inch in diameter which has a convex lens cast in the glass. It is used in a miniature battery flash-light (3 in. by $\frac{1}{2}$ in. diameter) which fits in the vest-pocket and may be used for finding a key-hole or looking at a programme in a darkened theatre.

Improvements in highway lighting were accomplished by the further elimination of glare. This was effected by the use of improved luminaires and reflectors and the sodium vapor lamp. The 10,000-lumen lamp showed an increase in efficiency of 16 per cent over that of the preceding

year. These lamps now gave from 45 to 50 lumens per watt, as compared to 12 in the small house incandescents, and 20 in the larger sizes. The life of the new sodium vapor lamp was said to be from 1500 to 2000 hours. Also a new luminaire for street lighting for use with Mazda lamps showed an increase in efficiency of 50 per cent over those of previous models. A new double-filament headlight lamp for automobiles had its filaments in the form of two straight bars arranged in such a manner that one throws the light straight ahead while the other throws the light, not only down as the older ones did, but off to the right to illuminate the right shoulder of the road and thus make it convenient for the driver to keep close to his side without the danger of going off the pavement.

A new lamp for æsthetic effects had a brilliant but small 3-watt lamp totally enclosed in a fluorescent tubular screen. This gave a large source of light of low intrinsic brilliancy and of pleasing hues. A new light-meter for measuring illumination in foot candles is so small that it will go in the vest-pocket. It is $2\frac{1}{4}$ inches square by $1\frac{1}{4}$ inches thick and works on the principle of a photo-voltaic cell and ammeter. A new photo-electric spectrophotometer analyzes the various colors of the rainbow in any light and plots the relative intensities of the various components in wave-lengths. Another instrument measures the amount of short-wave light which comes from a source of ultra-violet light.

An instrument known as a "Stroboglow" was developed which gives a flashing light many times per second, from a neon light. By timing the flashes with the revolutions of a machine the moving parts appear to be standing still or may be made to appear to revolve very slowly so the parts or the movement may be studied. Distortions in the machinery may be observed. For studying the color and reflecting power of surfaces a new photo-electric device compares the direct light on, and the reflected light from, any surface and thus measures its reflecting power and indicates it on a dial.

ELECTRICAL INDUSTRIES. The steel mills of the country have spent millions of dollars this year in building the very latest and best of strip mills for producing sheet steel and this has involved very large orders for electric motors and control because all of them are electrically driven and require much power. These mills produce the sheet steel from which are made automobiles, furniture, tin cans, etc. One of these mills has 12 continuous roll stands using 39,000 h.p. in 13 motors. This will produce strip 72 inches wide at the rate of 2000 feet per minute. There are 6 alternating current induction motors for constant speed and 7 direct current motors for adjustable speed.

Another mill has a run-out table, like a moving platform, to carry the long strip away. This is driven by some 30 gear motors, small high speed motors which drive their load at slow speed through a worm gear. In a cold strip mill it is desirable to keep the strip under tension so the coil of cold strip is held by two cones pushed in the centre of the coil from the two sides like a two-part spool, and as the strip reels out it revolves the cones and these drive electric generators. By controlling the output of these generators the tension on the strip is regulated. In another mill the pressure on the sheet between the two rolls of a stand is measured and indicated by an electric strain gauge. Thus the operator can regulate the pres-

sure (in millions of pounds) to a required value with a discrepancy of only a few per cent. In some of these mills there are so many motors in one room that their losses cause an excessive temperature. This is taken care of by a closed-circuit ventilating system. The air is drawn down through the motors and sent through a cleaner and cooler and then returned to the motor room. This latter is closed tight and kept slightly above atmospheric pressure by a make-up blower which brings in cleaned air from the outside. This prevents dust and dirt from getting in from the street.

Electron tubes are playing an increasingly useful and important part in industry serving as sentinels and switchmen to turn on and off and regulate power at particularly important moments. Thus in a paper mill the tension on the paper must be kept constant and this tension is indicated by the slack or droop between consecutive rolls. By sending one beam of light just under where the paper should be and another just above that place, and focusing these beams on two photo-cells, any increase or decrease in the slack will interrupt the beam and the photo-cells will start a corrective action. In the spot welding of thin materials it is necessary to have very exact control of current and time in order that the weld will be good and yet not burn the material. These welds are made with many spot-welds per inch and many per minute. Each weld will require a certain current for a definite number of cycles of a 60-cycle current. A three electrode tube can not only count off the cycles from 1 to 30 (one-half second) but can start the current at just the right part of the cycle of the voltage curve so there will be no transient component of the current and thus a perfectly definite value of current.

Last year the two large electric manufacturing companies sponsored an exhibition of the electric equipment for the model modern home. This year the General Electric Company held a competition for architects for the design of such a home at moderate cost and actually built several of them in different parts of the country to show people what electrical conveniences and comforts were available at a moderate price, if the home were properly designed. This included electrically controlled oil heating, air-conditioning, refrigerator, electric range, clothes washer and dish washer, ironer, and the usual better known devices. The Federal Government built a whole town, Mason City, Oregon, for the employees on one of its projects, in which everything in the homes including the heating, was done electrically. Not a house in the town had a chimney. Several large dredges were built in which considerable improvements in control and regulation have been incorporated. These have been accomplished by supplying the main motors from an auxiliary set in which the voltage and frequency may be accurately controlled. In one dredge for the Fort Peck Dam the motor which drives the cutter head is made to give a definite constant torque at a controlled speed. This is accomplished by the Kramer system of control in which the current at slip frequency from the rotor of the large induction motor is led to a converter and other devices and fed back to the line. This makes it possible to control the slip and current of the rotor as is done with a resistance, but the energy is returned to the line.

A very large shovel for open pit coal mining takes 32 cubic yards, or 48 tons, at one bite. It weighs 1300 tons, has a reach of 110 feet, and can raise the material to a height of 70 feet. The total

power is 3500 h.p. in 10 motors and in addition a motor generator set for control of special motors.

The electrical industry is making a serious fight against noise, that insidious enemy of nerve-health which civilization has produced. Great improvements and simplifications have been made in noise measuring apparatus. It is becoming the custom to test the first few motors of every new line in a "sound proof" room, measure the noise it makes, and see that the amount is within certain established limits of decibels. Improvements in methods of dynamic balancing have gone so far that this source of noise has been eliminated, but magnetic and air vibrations are not so easy to eliminate.

Lift bridges are superseding the turning type and this has brought in the problem of lifting all four corners of the bridge at exactly the same speed to prevent jamming at one corner. The new Cape Cod Canal Bridge is the longest and the Triborough Bridge in New York City is probably the widest. These are lifted by induction motors and controlled by "Selsyn Motors" which act as if they were all on one shaft, although the connection between them is only electrical.

An almost unbelievable effect is obtained by a new "Pre-recording Oscillograph" which takes a picture of something before the shutter is tripped instead of after tripping as in the ordinary camera. It is used for recording unexpected events in an electric circuit such as lightning and short-circuits. The indicating device is in operation all the time and makes a trace of light on a fluorescent screen which has a time lag so that the picture on the rear appears about $\frac{1}{30}$ second after the stimulations on the front. The camera views the rear of the screen. Any disturbance trips the shutter of the camera in a very short interval and the camera records what began to happen $\frac{1}{30}$ second earlier.

A new and much more powerful permanent magnet steel was produced which is strong enough magnetically to replace electromagnets in many devices, such as loud speakers and contactors for control. A magnet of this material will lift 60 times its own weight.

A new magnetic steel for transformers and high class apparatus was produced, being a new composition of iron and silicon which has a much lower core loss and higher permeability than previous compositions and will still further improve the efficiency and reduce the heating of electrical apparatus.

Many improvements were made in X-ray apparatus, of which the two of greatest interest are: a means of passing packaged goods over a source of X-rays so that an operator may detect any foreign matter or any incompletely filled package; and a medical device in which the operator may quickly get an X-ray photograph of the exact part of a person under the exact conditions as he sees it in the fluoroscope. It may be compared to a Graflex camera in which the subject is seen right up to the time the picture is taken.

An "Iron Detector" will detect scrap iron, tacks, nails, etc., in other materials and is used in one of the Federal prisons to detect any firearms being smuggled into the prison.

Household refrigerators have been improved in efficiency so that the 7 cu. ft. size now transfers 550 b.t.u. per hour with a consumption of 30 kw-hrs per month as compared to 340 b.t.u. for 55 kw-hrs in 1927. A "Kitchen Waste Unit" chops and grinds all waste, even bones, to so fine a composition that it may be washed down the drain pipe.

ELECTRICAL MACHINERY. The business of manufacturing electrical apparatus showed a gain in 1935 of 30 per cent over that of 1934 and amounted to \$850,000,000. This gain was largely in appliances for the home and replacements in industrial plants. The output of capital goods in this category has not shown an appreciable increase because of the absence of the Public Utilities from the market, although it is a well known fact that much of the apparatus now in service in this line is in need of replacement and there will shortly be a need for greater capacity.

The 82,500 kilovolt-amperes 180 revolutions per minute generators for Boulder Dam are now in place and soon will be in operation. The 56,000 kv-a 112 r.p.m. generators for the Norris Dam of the TVA are also being installed. These have some novel features in their mechanical construction in order to reduce their height and save headroom for a crane. They are single bearing machines with a drooped, umbrella shaped rotor on the top of a vertical shaft. The pilot exciter is built inside the main exciter and both are on the main shaft. The 36,000 kv-a generators at 85.7 r.p.m. for the Joe Wheeler Dam of the TVA are designed for outdoor operation. These machines are equipped with surface air coolers, a new and growing practice in the design of water wheel generators.

Two 60,000 kv-a 60-cycle synchronous condensers were built for the Los Angeles end of the Boulder Dam transmission. These are the largest so far built, are totally enclosed and operate in an atmosphere of hydrogen for cooling purposes. They will serve to regulate the voltage and power factor at the Los Angeles end of the 287,000 volt, 266 mile line. These machines are designed to act either as a 60,000 kv-a anti-inductive load or as a 36,000 kv-a inductive load when the line is lightly loaded. There are also frequency changer sets for 60,000 kv-a at 600 r.p.m. for interconnecting the 50 and 60 cycle systems in the vicinity of Los Angeles. These machines are also hydrogen cooled. A special feature of the construction is that the two machines of a set have their own independent bearings so that later when the 50 cycle system is changed over to 60 cycle, both machines can operate as independent 60 cycle synchronous condensers at different speeds, because one machine has 10 poles and the other 12 poles. In the Richmond station in Philadelphia a new 165,000 kw turbo-generator was installed in the space originally (1925) allocated to a 60,000 kw generator, showing the improvement in design in 10 years. This set has the greatest capacity of any so far built and the generator has the record efficiency of 98.7 per cent.

A 40,000 kw turbo-generator set to operate at 3600 r.p.m. is also a record breaker for this speed. The steam supply is at 1250 lb. and 925°F and the generator is hydrogen cooled. The steam end is a non-condensing "top turbine" exhausting into an older turbine at a lower pressure.

A new practice has been introduced in the protection of large electric machines by piping them for a supply of carbon dioxide which is kept stored in reserve and may be turned into the machine in case of a fire resulting from a short circuit. On the side of the theory of design and operation of alternating current machines some very interesting new thoughts were brought out in papers presented before the A.I.E.E. on the leakage reactance of synchronous machines as an extension of the Potier method of testing and on the appli-

cation of "Tensors" to the calculation of the performance of machines. This is a form of mathematics using vectors in a very elaborate system. All-metal electron tubes were produced in greater number and variety and in larger sizes and made available to industry both as controllers and suppliers of power. Current up to 25 amperes may be obtained. Mercury arc rectifiers of the pool-type in glass tubes give instantaneous currents up to 5000 amperes for spot welding. That form using the extra electrode dipping into the mercury as an igniter is becoming popular.

There was a considerable increase in the use of the large size mercury rectifiers, for instance for the new New York City Subways. The igniter type is being tried in this size also. In experimental work these pool type rectifiers are being built for 15,000 volts. For Boulder Dam the first of 14 65,000 kw three phase transformers was installed. This is so large that the case had to be shipped in two parts and welded together at the place of installation. The efficiency is 99 per cent. The transformers will operate at 287,000 volts and were tested at 1,650,000 volts. For indoor installation in cities some 500 kv-a transformers were installed using Pyranol instead of oil because it is a non-inflammable and non-explosive liquid with high insulating qualities.

A new type of transformer for rural and farm supply, called a "Rural-line Transformer" was brought out. It is a single phase transformer to be connected between one line of a three-phase transmission to ground and has only one bushing, the other terminal is connected to the tank and this to the solidly grounded neutral of the high tension line. The secondary is a three wire single phase circuit with grounded neutral. Capacitors were improved, particularly by the use of Pyranol as a dielectric and their bulk reduced about 25 per cent for a given rating. As a result capacitor motors for fractional horse power were very much improved. The use of a transformer has been discontinued in some and increased capacity provided for starting, while some capacity is cut out for running conditions.

ELECTRICAL TRANSMISSION AND DISTRIBUTION. The Boulder Dam to Los Angeles 266 mile transmission line at 287,000 volts is going forward rapidly and is having incorporated in it many new features. The Lightning Arresters at one end are of the "Thyrte" type and at the other end of the "Autovale" type. The two types are very similar, consisting of a number of circular discs of a porous material of ceramic base. These discs are made up into units rated at 11,500 volts and 20 of these units are stacked in a column 32 feet long, and connected electrically in series. This column is held together by three strings of suspension insulators and the whole is suspended from above by springs to avoid mechanical shocks such as would result from earthquakes. The electrical connection between successive sections and at the two terminals are made with flexible leads. To protect the line from lightning there is an overhead ground wire with a good electrical connection to the steel of each tower, and the tower itself is connected to a "counterpoise," a network of wires buried several feet under ground and, in general, beneath the power wires. This serves first as a capacity or reservoir to store up the energy from a lightning stroke and also as a good earth connection to let the electricity flow to earth as easily as possible so that the lightning will take this path rather

than along the power wires. To further protect the power wires there are protective gaps across the strings of insulators at about every tenth tower. These gaps discharge the lightning current around the insulators before the potential is high enough to flash over the insulators themselves and the protective gaps are ingeniously designed to clear themselves and open up the gap as soon as the lightning energy has been discharged. This is accomplished in two ways in two different forms: In one the "De-ion" principle is used to quench the arc and in the other the pressure of the gases developed by the arc is used to blow out the arc and clean out the chamber.

The electrical engineer believes that with these three types of protection lightning is no longer a serious hazard in transmission. The unusual circuit breakers for this installation are installed in part and were described in a preceding edition (1934).

The long continued research on lightning has been cumulatively developing new and valuable information. The use of magnetic links has made it possible to measure currents of from 60,000 amperes to 200,000 amperes in the steel structure of towers struck by lightning. It has shown that this current is upward from earth to cloud in about nine out of 10 cases, that is, that negatively charged clouds cause most of the strokes. Other devices show that voltages up to two million have occurred. Other investigations confirm the theory that most lightning discharges are of the multiple stroke type with several successive discharges. At Pittsfield, Mass., an observatory has been erected with a periscope which embraces the whole 360 degrees of the horizon at once and with this many photographs of lightning have been made. Further studies have been made and records taken of the wave-shape of a lightning and surge discharges, including the steepness of the wave-front (rapidity of rise of potential) and length of impulse in microseconds (one-millionth). Now it is possible to classify these by mathematics and reproduce any particular type by means of "Impulse Generators." One of these gives a rise of voltage to three million and then suddenly an auxiliary device sends 150,000 amperes into the circuit.

Much study has been given to "Voltage Recovery Rate" in circuit-breakers on various circuits. This means the length of time required for the voltage across the circuit-breaker to rise from zero, with closed breaker, to full voltage when the breaker is open and the arc has been quenched. This information has been put into practical form for use in predeterminations.

The new system of transmission by direct currents was shown on a small scale at a scientific meeting of the electrical engineers and announcement has been made that a contract has been signed for a line between Schenectady and Spier's Falls, N. Y. The energy will be converted from three phase, constant potential at 40 cycles to 15,000 volts, constant value direct current for transmission and then re-converted to constant potential 60 cycle three phase to be sent into the general 60 cycle system. This first installation is for 5000 kw and will make available commercially the power from an old 40 cycle power station which has lost most of its customers because 60 cycle apparatus has superseded 40 cycle apparatus. The conversion at both ends is accomplished by static rectifiers on the electron principle, in other words, the new metal tubes.

Many installations of "Carrier Current" control were made. By this control distant substations

were operated—switches opened and closed—from a central point by means of radio principles in which the radio frequency currents are sent over the main high voltage power lines simultaneously with the power current. A considerable improvement was made in the "Capacitor Insulator" by which the radio circuit is coupled to the power circuit. Capacitors were improved, reduced in cost and are increasingly used for power factor and voltage regulation on 4400 volt distribution systems.

A new "Totalizing Demand Meter" registers the total demand on several demand meters, each installed on a separate feeder supplying some one large customer. It may be likened to a device which will register in the main office the total number of people entering a theatre by several different entrances.

Much research both ultra-scientific and practical was accomplished on "Dielectrics." The practical side was mostly devoted to the insulation on high voltage underground cables. As a result the losses in the dielectric have been decreased to one fifth of the value common in 1920. A new phenomenon, the variation in power factor of dielectric with increasing radius from the conductor received particular attention and pointed to some features of construction which were undesirable and were corrected in the latest designs, resulting in a longer useful life of a cable because these losses no longer increased excessively with age. An outstanding example of high voltage cables was that of the Pennsylvania R. R., which installed 132,000 volt cables in its tunnels in Washington and Baltimore.

ELECTRIC LIGHT AND POWER INDUSTRY. The principal activity in the electric light and power industry was political rather than technical or economic although there were some important economic advances. The passage by Congress of the Public Utility Act of 1935, better known as the "Wheeler-Rayburn Bill," was the cause of much argument. This law provides for far-reaching changes in organization and management of all public utilities and the dissolution of some of the holding companies. It is being bitterly fought by some of the utilities on the ground of being unconstitutional and confiscatory. Another controversial subject is the increased activity of the Federal Government in building plants to produce electrical energy in competition with the existing privately owned plants. To date, \$589,000,000 has been appropriated by Congress for power projects, most of which (\$400,000,000) was for outright Federal water power plants, and a minor part for state and municipal plants. It was estimated that it will require about one billion dollars to complete the projects already started.

The energy generated by the privately owned central stations was 98,670,000,000 kilowatt-hour with a total capacity of 35,800,000 kw. Deducting from this for the electric railway operations we have for the electric light and power business a generation of 93,575,000,000 kw-hr, and a capacity of 33,900,000 kw. This output is a gain of about 9 per cent over 1934. But most of the increase occurred in the fall when the weekly rate rose to 2,000,000,000 kw-hr per week, which gives much promise for 1936. Of this energy, 77,355,000,000 kw-hr went to the ultimate consumer which is 2 per cent above the previous high in 1929. Among the customers, Wholesale Power took 53 per cent; Commercial 18 per cent; and the Domestic Consumer 18 per cent. This was an increase of 11 per cent in the energy for industrial plants and a 10 per

cent gain for domestic customers. The sale of 1,500,000 refrigerators during the year accounted for part of this and other appliances for the remainder.

The revenue was \$1,923,500,000, a gain of 4.7 per cent over 1934 but still below that of 1929. This shows a decrease in the average rate to 2.5 cents per kw-hr against 2.59 in 1934. Expenses increased so that operating expenses are now 43.7 per cent of income and taxes have risen to 14.2 cents per dollar of revenue.

The number of customers increased 2.1 per cent to 25,300,000 of which 20,000,000 were in the domestic classification including 500,000 new ones. The average bill of a domestic customer increased to \$34 per year but the average rate decreased to 5.07 cents per kw-hr as against 5.40 in 1934. There has been a 7 per cent gain in farm customers to 793,977.

The Federal Power Commission made a report to Congress on the rates charged to residential customers for electric service. This showed a very great discrepancy in the rates varying from about 90 cents for the first 25 kw-hr per month in Cleveland, Ohio to \$2.40 per month in Miami, Florida. For 250 kw-hr per month the charge ranged from \$3.90 in Tacoma, Wash., to \$16 in Westchester County.

Of the energy generated 60 per cent was derived from fuels and 40 per cent from water. This has been a good year for hydroelectric stations because of plentiful rain and showed a production of about 40,000,000,000 kw-hr from a capacity of 10,000,000 kw or a load factor of 45 per cent. Fuel stations had a load factor of 27.3 per cent. The average load factor for the whole industry was 31.5 per cent. Coal consumption per kw-hr was 1.47 lb. as in the previous two years.

The number of miles of Rural Lines is now 302,000, an increase of 7 per cent over 1934. There were 7.6 customers per mile on these lines.

New issues of utility bonds amounted to a little over one billion dollars but only \$26,000,000 was for new enterprises, all the remainder was for refunding older issues at a lower rate of interest. The average interest rate on utility bonds is now at 3.5 per cent. During the year the utilities spent \$237,000,000 for additions and \$93,000,000 for maintenance.

ELECTRIC MARINE ENGINEERING.

The only outstanding achievement in the application of electricity was the actual service of the new French passenger liner, *Normandie*, which finished her maiden trip on June 3, 1935. This vessel has four turbo-electric generators of 40,000 kw capacity each, and four 40,000 h.p. synchronous motors, one on each propeller. Its equipment is the same in capacity as the U.S.N. airplane carriers *Saratoga* and *Lexington*, but differs in the detail that the *Normandie* is driven by synchronous motors and the carriers by changeable speed induction motors. The induction motors permit operation economically at two definite speeds and give better speed control at all speeds, but the synchronous motors are smaller and have a higher efficiency and power factor. By varying the speed of the turbo generator sets adequate speed variation for mercantile service is obtained since speed variation is only necessary while navigating in terminal harbors. During the summer the *Normandie* broke all previous speed records, crossing from Ambrose Lightship to Bishop's Rock, England, 3012 nautical miles in 4 days 3 hours and 28 minutes, showing an average speed

of 30.3 knots. The U.S.S. *Lexington*, with similar electric propulsion machinery, made the run from San Pedro, Calif., to Honolulu, 2226 nautical miles at an average speed of 30.66 knots.

ELECTRIC TRANSPORTATION. The electrification of the Pennsylvania Railroad from New York to Washington was completed and is now in full operation. This includes 58 streamlined, high speed, passenger locomotives of 4620 h.p. each continuous rating, and 1405 miles of electrified track. In addition there are over 100 electric freight locomotives and 431 electrically driven multiple-unit cars. The 225 mile trip is made by the passenger trains in 3 hours and 45 minutes. The locomotive can haul 16 passenger cars at 90 miles per hour. The six 770 h.p. single phase motors weigh 16 lb. per h.p. of continuous rating. The freight locomotives can be used for either freight or passenger trains and can haul a freight train at 50 m.p.h. The Baltimore and Ohio R. R. placed in service a Diesel-electric locomotive of 1800 h.p. to haul its fast trains between New York and Washington. The Atchafalaya, Topeka and Santa Fe has a 3600 h.p. locomotive in two units operating passenger trains over the 2200 mile run between Chicago and Los Angeles. This has four 900 h.p. Diesel-electric generating sets.

Many new lightweight, streamlined, high speed trains were put in service: The Boston and Maine, the Union Pacific 7-car train, the "Zephyrs" of the Burlington. Most of these have one or two 600 h.p. sets but some 1200 h.p. sets are used on locomotives. The new equipment developed by the Electric Railway President's Conference Committee is replacing older style cars on the Brooklyn and Queens and Washington, D. C., lines. This gives an average acceleration of 4.75 m.p.h., twice as much as the older, with just as smooth effect. Dynamic braking makes the stopping quicker and smoother. Each car has four lightweight, spring-born motors with 300 volts on each motor. The motors have double reduction gears and the control is with groups in series-parallel with 23 steps and a transition which avoids the surge at the change from series to parallel. Trolley coaches were added to the existing railways in San Francisco, Dayton, and Cleveland, Ohio. These run on rubber tires, without rails, but take power from a double overhead trolley. A typical car has two 65 h.p. motors and dynamic braking and makes a schedule speed of 13 m.p.h. In San Francisco the braking on the down grade is very important. The "All Service Bus" was introduced. It contains a gas-electric set and operates from overhead trolleys part of its route and when it reaches the end of the electric system it continues on gas power, thus extending the range of service beyond the city limits. Air conditioning of cars on the main line steam railroads continued and furnished quite a business for the electrical industry because of the axle-driven electric generators to supply the power and the electric motors for refrigeration and ventilation. The New Haven, Boston and Maine, Union Pacific, and New York Central, are among the lines adding new equipment of this character.

In foreign countries there were some more main line railway electrifications on a large scale. In Brazil a contract has been let to a British manufacturer for the complete electrification of 91 miles of route comprising double and four track sections with the 3000 volt direct current system with mercury arc rectifiers as a source of the direct

current. In South Africa plans are being completed for a similar 3000 volt direct current enterprise.

ELECTROCHEMICAL SOCIETY. See **CHEMISTRY.**

ELECTRON OPTICS. See **PHYSICS.**

ELMIRA COLLEGE. An institution for the higher education of women in Elmira, N. Y., founded in 1852. The enrollment for the autumn of 1935 was 341. There were 50 members on the faculty. The endowment of the college amounted to \$1,147,248; and the income for the year was \$292,005. There were 44,197 volumes in the library.

President, William S. A. Pott, Ph.D.

EMERGENCY CONSERVATION WORK. See **INDIANS; PARKS, NATIONAL.**

EMIGRATION. See **IMMIGRATION.**

EMORY UNIVERSITY. An institution for higher learning in Atlanta, Ga., coeducational only in the upper division of the college and in the graduate and professional schools (except the school of medicine), founded in 1836. The enrollment for the autumn of 1935 was 1309. The 1935 summer session had an attendance of 620. The faculty numbered 281. The endowment amounted to \$5,769,575, and the income for the year was \$615,000. There were 139,430 volumes in the library. The university operates Emory junior colleges at Oxford, Ga., and Valdosta, Ga., duplicating the work of the first two undergraduate years on the Atlanta campus. President, Harvey W. Cox, Ph.D., LL.D.

ENGINEERING. See **BOILERS; BRIDGES; CANALS; DAMS; ELECTRICAL MACHINERY; FIRE PROTECTION; GARBAGE AND REFUSE DISPOSAL; PORTS AND HARBORS; TUNNELS, ETC.**

ENGINES, INTERNAL COMBUSTION. Under this classification fall gasoline engines, diesel or heavy-oil engines, and gas engines. The gasoline engine is employed principally in the automobile and aviation fields, for motor boats, and for certain auxiliary service. The diesel finds application in small, and to a limited extent in medium-size, stationary power plants, in marine service, and in the transportation field. While a number of large gas engines are still operating on blast furnace gas in steel plants, in recent years the application of this type of prime mover has been confined largely to smaller units operating on natural gas in certain localities, for gas-line pumping and for general power service.

Aircraft gasoline engines have reached a high state of development as to performance, capacity, and weight. Outstanding among the recent engines is the "Wright Cyclone," a nine-cylinder, radial-type, supercharged engine developing 83.4 h.p. per cylinder at 0.48 pounds of gasoline per horsepower-hour. The engine which is rated at 750 h.p. weighs only 1½ pounds per horsepower. See **AERONAUTICS.**

Total sales of diesel engines in the United States during 1934 aggregated 750,000 h.p., while authoritative estimates, based on incomplete figures for 1935, place the sales for the latter year at close to a million h.p. Of these about 3000 engines, mostly under 300 h.p., were installed in stationary power plants.

Diesel Power for June, 1935, contains the accompanying table showing the distribution of diesel capacity built in the United States (see column 2).

The estimated economic life of a diesel, based on several surveys, seems to be about 10 years.

The largest diesel engines built and installed in the United States are the five 7000 h.p. units that were placed in operation two or three years ago in the municipal plant at Vernon, Calif. Units up to

	Use	Horse power
Marine	1,081,400
General industry	973,575
Mobile equipment (excluding railroad)	616,800
Public utilities	606,200
Petroleum industry	535,200
Municipal plants	435,200
U.S. Navy and Coast Guard	274,200
Cotton gins	195,800
Mines and quarries	172,500
Railroads	164,800
Exported	131,600
Ice plants	110,000
Water works	105,400
Irrigation and drainage	104,600
Government institutions	77,500
Buildings	16,800
Miscellaneous	75,000
Total	5,676,575

3000 h.p. capacity are in service in other municipal power plants but, because of certain restrictions and legal proceedings in securing PWA loans, the number of municipal power projects that materialized during 1935 were less than had been anticipated. Small diesels, up to 200 h.p., are becoming strong competitors of purchased power in small manufacturing plants, especially in the non-process industries.

While there have been few recent changes in fundamental design, there have been many refinements in detail and advantage has been taken of metallurgical advances and progress in the welding of frames to reduce weight. Reliability has been stressed in the later designs. Despite predictions of a few years ago, the heavy duty diesel for stationary and marine service has not passed out of the picture, although the trend is distinctly toward lighter weight and the adaptation of higher speed ranges to particular applications. A number of builders are now offering lightweight, high-speed diesels for stationary service up to 200 h.p. and 1800 rpm. Solid injection of the fuel is being employed to an ever increasing extent over air injection. Supercharging, by which the power may be increased up to one-third, is popular abroad but has not been employed extensively in this country. One well-known company is now offering a line of opposed-piston engines.

Within the past few years diesels have become an important factor in the field of transportation, for both railway service and for heavy trucking; but, excepting some experimental work, they have not yet earned recognition in the aviation or passenger automobile fields.

A number of railroads have for some time employed diesel locomotives for yard switching and diesel-electric drive in railcars on short-haul routes. More recently, however, this form of motive power has been applied to cross-country passenger service. Such applications during the year have included units on the New York, New Haven & Hartford, the Gulf, Mobile & Northern, the Santa Fe, and the Baltimore & Ohio. The Chicago & Northwestern and the Burlington had already placed such trains in service and the *Mark Twain Zephyr* of the latter road is reported to have established, on October 23, a short-distance speed record of 122 miles per hour. While there is a definite saving in fuel cost, experience to date has been too limited to offer much data as to maintenance; consequently there still exists considerable difference of opinion as to the relative over-all economy of diesel and steam for fast long-haul service.

The use of diesels in heavy trucks continues to gain favor because of the greater economy in fuel as compared with the gasoline engine. Also some builders have brought out small, lightweight, high-

speed diesels for use in light trucks. These engines range in weight from 9 to 12 pounds per horsepower. In the tractor field diesels appear to be rapidly supplanting the gasoline engine.

In the marine field, improvements in steam practice have reduced the differential in fuel economy as between steam power and diesels. European practice has always favored diesels of larger powers than American practice, but it is significant that most of the more recent large passenger liners are steam propelled. Diesel propulsion is being employed in many of the foreign built cargo ships, tankers, and medium-size passenger vessels, but in this country the application of diesels is being confined mostly to relatively small vessels.

The extensive natural-gas pipe line construction of a few years back has made natural gas available to many sections of the country. This stimulated the use of gas engines for many services. Recent designs trend toward high-speed engines of the vertical type. Some of these are also adaptable to using gasoline.

Gas engines are also employed in a number of cases to produce power from municipal sewage-treatment works. This gas is high in methane and has a heat content of 500 to 800 British Thermal Units per cubic foot. Such installations are to be found at Durham, N. C.; Coney Island, N. Y.; Peoria, Ill.; Springfield, Ill.; Cedar Rapids, Iowa; Janesville, Wis.; Ann Arbor, Mich.; Battle Creek, Mich.; and Washington, D. C. In most cases the power thus derived is employed for pumping and other service around the sewage treatment plant.

ENGLAND, CHURCH OF. In England, that church which is established and endowed by law as the national church. Its faith is represented in the United States by the Protestant Episcopal Church (q.v.). (For details of church government, see the *NEW INTERNATIONAL YEAR BOOK*, 1932.) In 1933, there were 2,463,421 Easter communicants in the 43 English dioceses. Incumbents numbered 12,415 and assistant curacies, 4266. There were baptized during the year 381,102 infants and 10,271 persons of riper years. The total voluntary parochial contributions amounted to £6,139,397.

The year of the Royal Jubilee (1935) was notable for remarkable progress and development of church life at home and for the growing influence which the Church exercised in the international sphere as well as on the national life of England. That influence especially made itself felt through a series of weighty pronouncements by the Archbishop of Canterbury, and through some memorable debates in the Church Assembly, the Convocations of Canterbury and York, and the Church Congress. Prominent among the subjects of these pronouncements were the German treatment of the Jews, the Church controversy in Germany, and the Italo-Abyssinian war.

The following two measures were passed by the church assembly in 1935, and received royal assent.

Diocese of Southwell (Transfer) Measure, 1935, restores the Diocese of Southwell, which now forms part of the Province of Canterbury, to its ancient position as part of the Province of York (Royal Assent, Aug. 2, 1935). The transfer actually took place on Oct. 26, 1935.

Farnham Castle Measure, 1935, facilitates the use of part of Farnham Castle as an episcopal residence for the Bishops of Guildford (Royal Assent, Aug. 2, 1935).

The Clergy Pensions (Widows and Dependents) Measure, which was dropped in 1934 was again introduced in a somewhat modified form and it

is hoped that it will be passed and receive the Royal Assent in the early part of 1936. The reorganization and amalgamation of the Ecclesiastical Commission and Queen Anne's Bounty is proceeding slowly, but no very definite steps in that direction are likely to be taken at present.

Among the memorable debates of the year were Peace, the Treatment of the Jews in Germany; the German Church controversy; Clergy pensions; Spiritual Life in the Parishes; the Missionary Work of the Church; Unemployment; Danger on the Public Highways; the Influence of the Cinema; and Nursery Schools.

Work abroad suffered in various mission fields from earthquake, flood, drought, and plagues of locusts, and the war in the Near East increased the difficulties of church work in that area. Nevertheless, there were evidences that the Church overseas was making real advance. The first Bishop of the new diocese of Gambia and the Rio Pongas, reached his field on Ascension Day. In China, Japan, and India, three more Bishops were consecrated from the ranks of the native clergy, and in the new Assistant Bishop of Dornakal, one saw for the first time a European Bishop working under a national diocesan Bishop. The first mission by air was started when the Melanesian Mission sent two pioneer missionaries to the newly-discovered tribes in Central New Guinea.

On the occasion of the King's Silver Jubilee loyal addresses to the Throne were presented by the Convocations of Canterbury and York. The principal subject of debate which came before the Convocations during the year was that of Marriage, which was considered on the Report of the Joint Committee on the Church and Marriage. This Report was still under consideration at the end of the year. Other important reports which were laid before the Convocations dealt with the Relations of the Church of England to the Free Churches, to the Church of Scotland, and to the Church of Finland. Both the Upper and Lower Houses of the Convocations received the Report on Relations with the Free Churches and commended it "to the sympathetic attention and careful study of the Church."

Other subjects which were before either or both of the Convocations included the Report of the Joint Committee on Union and the Laying-on of Hands; the Report of the Joint Committee on "Universities Representation"; Matrimonial Causes; the Transfer of the Diocese of Southwell; the position of Chaplains in public institutions; Licenses under Sea; the Status of Lay Readers; the School-leaving Age; and the Spiritual Welfare of the Deaf and Dumb.

During 1935, though the King's Silver Jubilee outshone all other anniversaries, several notable centenaries took place. Early in the year the twelfth centenary of the Venerable Bede was commemorated at Durham and so was the thirteen hundredth anniversary of the landing of St. Aidan at Lindisfarne. Honor was also paid to the memory of St. Frideswide of Oxford, and "Oswald of Northumbria, Saint and King," whose victory at Heavenfield in 635 A.D., signalized the final triumph of Christianity in the North of England. Another celebration was that of the centenary of the Diocese of Madras, on the Festival of St. Simon and St. Jude, October 28, on the eve of which a Thanksgiving Service was held in Westminster Abbey. The American Episcopal Church also celebrated the 150th anniversary of the conse-

cration of its first Bishop after the War of the Revolution.

The Church Congress was held at Bournemouth from Oct. 8-11, 1935, and was well attended. The general subject was "Christianity in the Modern State" and addresses were grouped under the following subsidiary titles: "What Is Christianity?"; "Grounds for Belief in Christianity"; "Christianity and the Claims of the Modern State"; "Christianity and Communism"; "Church and State in England"; "Christianity and the Relationship between States"; "Education"; "The Family"; and "Life or Death: The Eternal Choice." The Bishop of Winchester presided and the Congress Sermon was preached by the Archbishop of York.

During the year conferences of the various Church organizations again took place. A meeting of the Church Union was held in the Albert Hall on July 11. Lord Halifax presided and the subject was "Is England Christian Still?" The 108th Islington Clerical Conference was held on January 8 at the Church House, Westminster. The Rev. J. M. Hewitt, Vicar and Rural Dean of Islington, presided and the subject was "Grace." The 18th Conference of Evangelical Churchmen was held at Oxford from April 8-10. The subject was "The Gospel of Christ and Present Day Evangelism" and the Rev. C. M. Chavasse presided. The 22d Modern Churchmen's Conference was held at Cambridge from August 26-31. The Very Rev. W. R. Matthews presided and the subject was "The Church of England: Its Constitution, Character and Call." The eighth Cromer Convention was held by the Anglican Evangelical Group Movement from June 22-29. The subject was "The Church in the Modern World" and the leader of the Convention was the Ven. H.St.B. Holland, Archdeacon of Warwick.

Among the outstanding appointments of the year were those of

The Most Rev. H. F. Le Fanu, Archbishop of Perth, to be Primate of the Church of England in Australia and Tasmania
The Rt. Rev. A. J. Maclean, Bishop of Moray, Ross and Caithness, to be Primate of the Episcopal Church in Scotland
The Ven. J. W. Hunkin, to the Bishopric of Truro.
The Rt. Rev. E. J. Bidwell (formerly Bishop of Ontario), to be Assistant Bishop to the Archbishop of Canterbury.
Canon J. L. Barkway, to be Bishop Suffragan of Bedford.
The Rev. H. E. Sexton, to be Coadjutor Bishop of British Columbia
The Rt. Rev. C. C. Watts, to the Bishopric of Damaraland.
The Rt. Rev. P. C. T. Crick (formerly Bishop of Balarat), to be Assistant Bishop to the Bishop of Derby.
The Ven. A. B. Elliott, to be Assistant Bishop to the Bishop of Dornakal.
Canon A. C. W. Rose, to be Bishop Suffragan of Dover.
The Rev. H. G. Bullen, to be Assistant Bishop to the Bishop in Egypt and the Sudan.
The Rev. J. C. S. Daly, to the Bishopric of Gambia and the Rio Pongas.
Canon, A. I. Greaves, to be Bishop Suffragan of Grantham.
The Rt. Rev. E. M. Blackie, to be Bishop Suffragan of Grimsby.
The Ven. Mok Shau Tsang, to be Assistant Bishop to the Bishop in Hong Kong.
Canon S. K. Tarafdar, to be Assistant Bishop to the Bishop of Calcutta, and Metropolitan of India, Burma, and Ceylon.
The Ven. W. Jameson Thompson, to the Bishopric in Iran.
The Ven. Dennis Victor, to the Bishopric of Lebombo.
The Rt. Rev. J. J. Willis (formerly Bishop of Uganda), to be Assistant Bishop to the Bishop of Leicester.
The Rev. P. S. Sasaki, to the Bishopric in Mid-Japan.
The Rev. F. O. Thorne, to the Bishopric of Nyasaland.
The Ven. E. H. Knowles, to the Bishopric of Qu'Appelle.
The Rev. P. Carrington, to the Bishopric of Quebec.
The Rt. Rev. C. A. W. Ayles, to the Bishopric of St. Helena.
The Rev. J. C. Mann, to the Bishopric in South Japan (Kyushu).
The Ven. A. W. Lee, to the Bishopric of Zululand.
Canon W. A. Robins, to be Archdeacon of Bedford.

Canon R. Brook, to be Archdeacon of Coventry.
Canon A. Baines, to be Archdeacon of Halifax.
Canon A. F. Gaskell, to be Archdeacon of Rochdale.
The Very Rev. E. L. Henderson, to be Dean of Salisbury.
Preb. R. L. Hodson, to be Archdeacon of Stafford.
The Rt. Rev. G. A. Hollis, to be Archdeacon of Wells.
The Rev. E. R. Morgan, to be Archdeacon of Winchester.
Canon F. Harrison, to be Chancellor of York Minster.
The Rev. H. Anson, to be Master of the Temple.
The Rev. A. D. Gilbertson, to be Chaplain of the Fleet.

The officers of the church assembly in 1935 were: chairman, the Archbishop of Canterbury; vice-chairman, the Archbishop of York; secretary, Sir Philip W. Baker-Wilbraham; assistant secretary, Guy H. Guillum Scott; chairman of the house of bishops, the Archbishop of Canterbury; chairman of the house of clergy, the Dean of Norwich; chairman of the house of laity, the Earl of Selborne. Headquarters are at 8 Dean's Yard, Westminster, S.W.1, London.

ENGLISH LITERATURE. See LITERATURE, ENGLISH AND AMERICAN.

ENTOMOLOGY, ECONOMIC. The year 1935 was marked in the field of applied entomology by the advance in control and eradication work with insects of major importance made possible by the appropriation and allotment of Federal funds.

Alfalfa Insects. It was shown that the injury to alfalfa by the leafhopper, known as "yellows disease," which has occurred in several States can be satisfactorily and efficiently controlled through a deferred cutting that destroys the immature stages of the insect. The alfalfa weevil spread during the year and was found infesting additional counties in Nebraska, Utah, Arizona, Nevada, California, and Oregon. Investigation in California led to the conclusion that due chiefly to unfavorable climatic conditions the weevil will not become a major pest over most of the alfalfa growing region of that State.

Bark Beetles and the Dutch Elm Disease. Eradication work with the bark beetle-transmitted Dutch elm disease which has invaded the tristate area of metropolitan New York (see NEW INTERNATIONAL YEAR BOOK for 1934, p. 215) and threatens the extermination of this majestic shade tree was pressed with great vigor supported by Federal and State funds, particularly relief funds.

Black Widow Spider. Local cases of poisoning caused by bites of the black widow or hour-glass spider (*Latrodectus mactans*) reported in newspaper and magazine articles and warning the public against it brought this arachnid to widespread attention. It occurs in nearly every State of the Union and south through Central and South America. In its natural habitat the spider is found with its web and egg sacs in protected darkened locations, such as vacant rodent burrows, under stones, logs and long grass, in hollow stumps and brush piles. It takes up its abode in man-made structures including cellars, garages, hen houses, barns, pump houses, and the home. The mature male does not capture prey and as a rule the female is not aggressive unless agitated or exceedingly hungry but when guarding the egg sacs if disturbed is particularly prone to bite. It is present throughout the year but relatively more abundant in the late summer and early fall. The adult female is glossy black to sepia and densely clothed with short minute hairs which give it a naked appearance. An irregular white stripe is sometimes present on the upper front margin of the abdomen. The characteristic hour-glass marking on the under side of the abdomen, rarely altogether absent, varies among individuals from the distinct hour-glass design to a design comprising

two or more distinct triangles or occasionally only an irregular longitudinal area. While the bite itself which is similar to a pin prick is not always felt, the pain, usually in the region of the bite, is felt almost immediately and increases in intensity reaching its maximum in 1 to 3 hours and generally continuing from 12 to 48 hours, gradually subsiding.

Chinch Bug. Reported to have caused a loss of more than 40 million dollars to corn, wheat, and oats in 1934 in Illinois alone the winter was successfully passed by the pest throughout the chinch bug belt. With a special appropriation of \$2,500,000 the Federal Department of Agriculture was prepared to furnish farmers with creosote to use in creosote-rimmed trenches along the edges of corn fields in the Central States to combat the pest. However the cold wet weather in the spring and early summer killed enormous numbers of first-brood bugs in small grains and prevented general outbreaks. A report was made of the development of strains of hybrid corn highly resistant to it and also high in yield and quality of grain.

Codling Moth. The codling moth or fruit worm, the most important pest of pome fruits, was generally less abundant in the eastern United States with a much heavier infestation from Colorado westward. High temperatures resulted in a decided increase in the amount of wormy fruit in the Pacific Northwest, and in the Sacramento Valley of California. The decline in abundance that commenced with the period of excessive heat and drought in 1934 continued, making it possible for growers to reduce worm injury to about what it was previous to the serious outbreak that reached its peak in 1933. The intensive research that has been conducted by Federal and State workers in recent years in an effort to develop a practical substitute for arsenate of lead and avoid an objectionable residue on the fruit was continued. Large-scale tests of various insecticides have shown arsenate of lead to still be the most generally satisfactory material available although not fully effective in the control of severe infestations. Closely approaching it in effectiveness is the nicotine-oil treatment which however involves certain difficulties in practical use. The work that has been carried on in the removal of the objectionable residue from the fruit at harvest time has shown the washing treatment with hydrochloric acid, salt, and light mineral oil in the brush machine to give the highest average efficiency in removal to meet the tolerance requirement, namely, 0.01 grain of arsenic and 0.018 grain of lead per pound of fruit. Work with supplementary control measures has shown a thorough cleaning up and banding of the orchard to reduce the injury to fruit by 30 to 50 per cent and that bait traps will reduce the infestation by about 25 per cent.

Cotton Boll Weevil. Infestations by the cotton boll weevil were generally heavy throughout the cotton belt, it being particularly troublesome in the South Atlantic States. Late fall reports indicated a reduction in the numbers going into hibernation in the Mississippi Valley cotton districts.

Giant Toad Control of Insects. THE. The giant toad (*Bufo marinus*) introduced into Puerto Rico from Barbados in 1920 has increased in such numbers that its food demand upon native white grubs, the most serious and generally destructive enemy of sugar cane and other crops, has reduced this pest to one of minor rank. This toad has since been introduced into the cane fields of Hawaii

where it has increased rapidly and is attacking sugar cane pests.

Grasshopper Pest. The hatching of grasshopper eggs in the Great Plains area was very much retarded by cool wet weather and the infestation in general was not nearly so serious as in 1934 (see NEW INTERNATIONAL YEAR BOOK for 1934, p. 216).

Hessian Fly. This major enemy of the wheat crop—which was at low ebb in 1934—, aided by the drought in the main wheat area, the late summer rains in the East Central States that encouraged growth of much volunteer wheat to harbor a late generation, and the rather general early sowing of wheat, severely infested some areas. The spring brood was unusually heavy in the East Central States with a generally increased population westward to Kansas.

Important New Insects. New insects of economic importance continued to make their appearance. The mealy bug *Phenacoccus aceris* Sig., common in Europe, has made its appearance in the apple orchards of Nova Scotia and become a source of damage through the resulting growth of a sooty fungus on the surface of the fruit. The larch sawfly (*Lygaeonematus erichsonii* Htg.) not previously recorded west of the Mississippi river was discovered in northern Montana and threatens the larch stands in the upper Rocky Mountain region. Well-established infestations of the white spruce sawfly (*Neodiprion polytomum* Htg.), a European pest, have been located over a considerable area in Maine, New Hampshire, and Vermont. A weevil enemy of the pepper plant in Cuba (*Cryptorhynchus cubae* Boh.) has made its appearance in southern Florida and already become a serious enemy of this crop. The cherry scale (*Aspidiotus forbesi* Johns) was found for the first time in California, attacking pears near Sacramento. A new mite (*Neotetranychus buxi* Gar.) was discovered attacking the foliage of boxwood in Michigan. The willow weevil (*Mimetus uniformis* Casey) introduced into deciduous fruit orchards near Sebastapol, California, on willow props attacked the apple and other fruits causing a loss in several areas of more than 50 per cent of the crop. The black wheat-stem sawfly (*Trachelus tabidus* (Fab.)) has appeared in wheat fields in Ohio where it is causing considerable loss. The alfalfa snout beetle (*Brachyrhinus ligustici* Linn.), a serious pest of alfalfa and clover in Europe, has become established along the shore of Lake Ontario in New York and completely destroyed entire fields of alfalfa on several farms and caused severe injury on many others. The tropical rat mite (*Liponyssus bacoti* Hirst), known to transmit endemic typhus, was discovered to occur in the St. Louis area of Missouri. The tomato pin-worm (*Gnorimoschema lycopercella* Busck), first found in California in 1922 injuring tomatoes, has appeared in several eastern States—particularly in green houses.

Mexican Bean Beetle. The emergence of the Mexican bean beetle took place two weeks later than usual in the New England and Middle Atlantic States; by the end of June it was generally destructive throughout its range. Heavy infestations were reported in August from practically its entire known range, which was extended northward in Vermont and Michigan and westward in Tennessee and Iowa.

Mosquito Control. A new larvicide for use in combating the mosquito was developed in New Jersey. It quickly destroys all "wigglers" with

which it comes in contact, is non-poisonous to the higher animals and man, is not injurious to water plants, and is cheap enough to render its use practical. This larvicide consists of a mixture of light petroleum oil and pyrethrin, an extract from pyrethrum flowers which have long been used in the making of Dalmatian insect powder. The addition of the pyrethrin to the oil so increases its effectiveness that four or five gallons will produce as large a killing film as was formerly obtained from 35 to 40 gallons. With the addition of a little soap a perfect emulsion can be made with ten or twelve times its bulk of water. Although protected by a patent against commercial monopoly no restriction is placed on its use. Experiments with this mixture have demonstrated that when applied as a fine mist by means of a sprayer it spreads over the soil and vegetation, to which it clings closely for several hours, acting as a repellent to adult mosquitoes. In this way outdoor gatherings such as carnivals, picnics, open air theatres, lawn parties, and open porch gatherings can be partially or completely and economically protected for periods of from two to four hours. In work aimed at the destruction and prevention of the dissemination of mosquitoes by aeroplanes a concentrated oil extract of pyrethrum flowers containing two grams of pyrethrin per 100 cc. was found highly effective against the yellow fever mosquito (*Aedes aegypti*) when applied as a very fine spray. Mosquitoes fumigated with the pyrethrum extract did not die at once.

Oriental Fruit Moth. This major enemy of the peach, quince, and apple appeared to be decidedly on the increase from the East Central States southward to Tennessee and Mississippi. It was scarce in the Eastern States and much less abundant in the Ontario Niagara District than in 1934. Some damage was caused in southern New Hampshire and it appeared for the first time in western Missouri at St. Joseph.

Pink Bollworm. Outstanding in the pink bollworm situation was (1) the finding of infestations in several additional counties in Northern Florida and three in western Texas, (2) no recurrence in the original infested areas of Florida and Georgia, and (3) continued progress in the eradication of wild cotton which serves as a host in southern Florida. On December 5 all parts of Georgia included in the regulated area were released from restrictions, the eradication work having proved successful. In aeroplane collections in the Big Bend area along the Rio Grande in Texas moths of the pink bollworm were taken as high as 3000 feet above the ground level and trap plots of cotton located 25 to 65 miles from the nearest cotton field became infested in five of the six years studied indicating that the moths fly or are carried involuntarily by the wind for considerable distances.

Screw Worm. The screw worm, the maggot or larval stage of a fly (*Cochyliomyia americana*) that resembles but is much larger than the common house fly, is a parasite of warm-blooded animals, infesting wounds on any part of the body. It destroys animal flesh and produces a substance that is poisonous to the infested animal. Unless treatment is administered the maggots, which produce a condition that attracts other flies to lay their eggs, enlarge the wounds and go deeper until they reach a vital organ or open the body cavity and cause death. The present outbreak of this pest in the Southeastern States dates from the summer

of 1932 when it first appeared in considerable numbers. During 1933 and 1934 there were 875,000 cases in Georgia alone of which 75,000 resulted fatally causing livestock owners a loss estimated at \$2,500,000. This enormous loss led to a Congressional appropriation of \$480,000 that was used during the year to carry on a campaign in which officials of the Federal government and of seven Southeastern States cooperated. Part of the fund was used in instructing farmers and ranchers how to protect stock, part for the purchase of benzol and pine tar oil for treating infested animals as well as material for building pens and chutes in which animals are held during treatment and part in the search for cheaper and more effective control measures. Carried in infested cattle and sheep shipped north to be fed in the Corn Belt the screw worm appeared in Kentucky, Illinois, Missouri, Kansas, and Iowa, there having been more than 7000 cases reported resulting in a loss of 4000 animals in Illinois alone. Lacking the resistance to cold it is not expected to survive the winter in the Corn Belt.

Sugar-Cane Moth-Borer. The sugar-cane moth-borer, the most important pest with which the sugar cane planters of the South have to cope, suffered a high mortality as a result of the severe freeze that visited the sugar-bowl area of Louisiana late in January. An examination made a month later indicated that an average mortality of 90 per cent of the overwintering larvæ had resulted. A similar heavy mortality followed heavy freezes in the Beaumont area of Texas.

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ENZYMES. See BIOLOGICAL CHEMISTRY.

EPIC MOVEMENT. See CALIFORNIA.

ERITREA, ər'ê-trā'a. An Italian colony in northeast Africa. Area, 45,754 sq. miles; population (1931), 621,621 including 4565 Italians. Chief towns: Asmara (capital), 22,101 inhabitants; Massawa, the main port, 4154 inhabitants.

Production and Trade. Potash, skins, pearls, and salt were the main products. In 1933, imports by sea (Massawa) and land totaled 200,297,943 lire; exports by sea (Massawa) and land, 81,825,983 (lire averaged \$0.0667 for 1933). Steamships entering Massawa in 1933 totaled 579,471 tons.

Government. The budget for 1934-35 was estimated to balance at 64,784,847 lire. Revenue included state contributions of 41,250,000 lire. Expenditure included 23,082,000 lire for military purposes. The colony was administered by a civil governor (nominated by the King) under the direction of the Italian Minister for the Colonies. See ETHIOPIA under History.

ESSENTIAL HYPERTENSION, SURGICAL TREATMENT OF. See MEDICINE AND SURGERY.

ESTONIA. A Baltic republic, established Feb. 24, 1918. Capital, Tallinn (Reval).

Area and Population. With an area of 18,358 square miles, Estonia had an estimated population in 1935 of 1,127,885 (1,126,413 at 1934 census). The urban population was 349,826. Living births in 1934 numbered 17,298; deaths, 15,889; marriages, 8958. The census populations of the chief cities in 1934 (1922 census figures in parentheses) were: Tallinn, 137,792 (122,419); Tartu, 58,876 (50,342); Narva, 23,512 (26,912).

Education. Elementary education is free and compulsory. The illiteracy rate among persons 10 years of age and over in 1934 was 3.9 per cent. Enrollment in primary schools in 1931-32 was 109,414; secondary schools, 13,258. Tartu University had 2842 students in 1933.

Production. About 70 per cent of the population are engaged in agriculture and dairying. Production of the chief crops in 1934 was: Wheat, 3,107,000 bu.; rye, 9,064,000 bu.; barley, 5,277,000 bu.; oats, 10,994,000 bu.; potatoes, 32,779,000 bu.; flax fibre, 15,618,000 lb. Livestock statistics (1934) were: 646,250 cattle, 552,070 sheep, 281,660 swine, 215,510 horses. The chief manufacturing industries are engaged in the production of textiles, paper, cement, oil from shale, wood products, flax, and leather. On Sept. 1, 1934, there were 38,156 industrial employees.

Foreign Trade. Imports for consumption in 1934 were valued at 55,275,000 Estonian crowns (39,030,000 in 1933) and exports at 68,973,000 crowns (45,558,000 in 1933). In 1934 Germany supplied 21.2 per cent of the value of all imports; United Kingdom, 16.4; and the United States, 10.4 per cent. Of the exports, the United Kingdom took 40.4 per cent; Germany, 22.5; and the United States, 2.3 per cent. Leading 1934 exports, in order of value, were butter, lumber, wood pulp, cotton cloth, and meat products. Leading imports were raw cotton, machinery, iron and steel, cotton fabrics, wool yarn, and fertilizers.

In 1935 imports totaled 68,757,000 crowns; exports, 80,118,000 crowns.

Finance. Budget estimates for the fiscal year ending Mar. 31, 1936, balanced at 77,700,000 crowns, including supplementary budgets, as against 74,581,000 crowns in 1934-35. Final returns for 1933-34 showed current receipts and expenditures of 63,603,000 and 61,121,000 crowns, respectively, and capital receipts and expenditures of 1,821,000 and 4,069,000 crowns, respectively.

The public debt on Mar. 31, 1935, was divided as follows: 20,107,000 U. S. dollars, 1,714,000 pounds sterling, 8,062,000 Swedish crowns, and an internal debt of 15,866,000 Estonian crowns. The crown (par value, after January, 1934, \$0.4537) exchanged at an average of \$0.2624 in 1933 and \$0.2719 in 1934.

Communications. Estonia in 1934 had 899 miles of railway lines. Air lines connected Tallinn with various cities of northern Europe. The merchant marine on Jan. 1, 1934, included 110 steamers, 22 motor ships, and 240 sailing vessels, with a total tonnage of 130,615 tons. Tallinn is the chief port. In 1934 the net register tonnage of vessels in the overseas trade entering the ports was 942,000 (885,000 in 1933).

Government. The Constitution of Jan. 24, 1934, established an authoritarian régime in which the President was given wide powers. It also provided

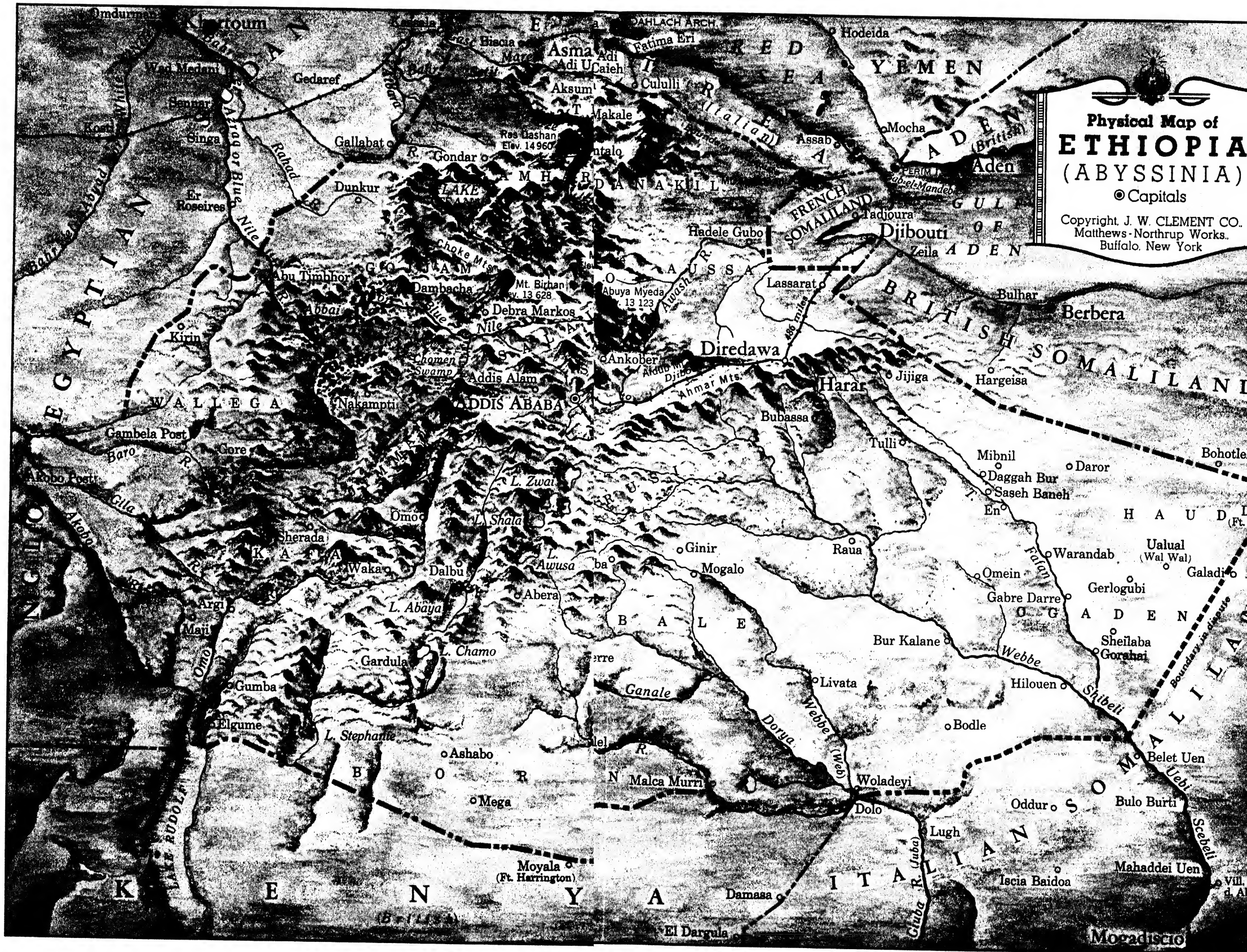
for an Assembly of 50 members chosen for four years by direct suffrage. On Mar. 19, 1934, however, Acting President and Premier Konstantin Pats and his non-party cabinet declared martial law and established a dictatorship which continued through 1935. See *History* for developments in 1935.

History. Internal Affairs. The dictatorship declared Mar. 12, 1934, by Konstantin Pats, Acting President and Premier, in collaboration with Gen. John Laidoner, commander-in-chief of the Army, and Minister of Interior Karl Einbund, ruled Estonia throughout 1935. The menace of a Fascist coup d'état had provided the occasion for the establishment of the dictatorship (see 1934 YEAR BOOK, p. 218), and Fascist conspiracies during 1935 gave the triumvirate an excuse for the continuance of its unconstitutional régime. In order to "liberate citizens from party strife" the dictatorship on Mar. 6, 1935, banned all political parties and prohibited all meetings, speeches, and articles of a political nature. On March 9 the one-party system was established in the form of a so-called Fatherland Front, based upon the Acting President's agrarian following. All other political groups were declared illegal.

On June 21 a Tallinn court-martial convicted 37 members of the Fascist group known as the Liberators, or Front Soldiers' League, who were arrested for conspiring against the government at the time the dictatorship was established. Fourteen defendants, including Gen. Anders Larka, the Liberators candidate for President in 1934, were sentenced to a year's imprisonment, while 23 received shorter terms. Apparently the sentences were commuted in part later. In July the country's oldest newspaper was placed under censorship as a result of its criticisms of the dictatorship's activities and in August the government announced plans for the drafting of a new Constitution to legalize its position.

The Liberators and allied Fascist groups, with apparent support from Fascists in Finland and Germany, planned another coup d'état against the government which was nipped in the bud on December 7-8. Police raided a secret meeting of the conspirators near Tallinn, arrested some 20 ring-leaders including General Larka, and seized documents which they said contained complete plans for a revolutionary uprising on December 8. Arrests continued for more than a month, and at the end of the year it was estimated that some 700 persons were in prison accused of complicity in the conspiracy. Alarmed by the widespread opposition, the government indicated that it was considering an early return to constitutionalism and to at least partially representative government.

In the economic field the government was more fortunate. The substantial recovery from the depression inaugurated in 1934 continued during 1935. Industrial activity exceeded that of 1929 and there were only 200 unemployed workers in the country at the end of September. The government accordingly announced the suspension of relief work during the coming winter. While agriculture had not recovered to the same extent as industry, farm prices were higher and farm purchasing power had risen considerably over the low level of the depression. Encouraged by the success of its economic policies, the government in September announced the extension and partial revision of its economic programme. Further entry of the government into the field of private



Physical Map of
ETHIOPIA
(ABYSSINIA)

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enterprise and further nationalization of industry were the major trends indicated.

External Affairs. As a member of the Baltic Entente (q.v.), Estonia was represented at the conferences held by Estonia, Latvia, and Lithuania at Kaunas on May 6-8 and at Riga on December 9-11. At both conferences the three states reaffirmed their political solidarity, considered measures for securing representation on the League Council, and took preliminary steps towards their eventual economic union, particularly the coordination of their agricultural and industrial production and the elimination of export competition. However some observers saw strong divisive tendencies within the Entente, with Estonia leaning toward Poland, Latvia toward Germany, and Lithuania toward the Soviet Union. Close co-operation between the Finnish and Estonian government in military matters became evident toward the close of 1935. General Laidonner, the Estonian commander-in-chief, visited Finland in October.

See LATVIA and LITHUANIA under *History*.

ETHIOPIA. An empire of East Africa. Capital, Addis Ababa. Emperor in 1935, Haile Selassie I.

Area and Population. Ethiopia has an area of about 347,500 square miles and a population variously estimated at from 5,000,000 to 10,000,000. The Abyssinians, the ruling race, are Christians of Hamitic origin. They number less than 3,000,000. The other chief tribes are the Gallas, Somalis, Afar, Arussi, Ogaden, and Danakil, which are mainly Moslem or pagan, but comprise a few Christians. The Christians have a Coptic Abuna, or head bishop, through whom they are connected with the Alexandrian Church. The Christians dwell mainly in the region bounded by Addis Ababa on the south and the frontier of Eritrea on the north and extending west of lake Tsana. Estimated populations of the chief cities are Addis Ababa, 60,000 to 70,000; Harar, 40,000; Dire Dawa, 30,000. Adowa, the capital of Tigre Province; Debra Markos, capital of Gojjam, and Aksum, the ancient capital and holy city of Ethiopia, have about 5000 inhabitants each.

Production. Stock raising and primitive agriculture are the chief occupations. The principal crops are coffee, cotton, sugar cane, dates, grapes, barley, millet, wheat, and tobacco. Coffee exports totaled about 12,500 metric tons in 1933-34. Cattle, sheep, goats, mules, donkeys, and, in some regions, camels are raised. Mining is carried on in a small way, the chief minerals being iron, gold (124 kilograms exported in 1931), platinum (about 207 kilograms in 1933), and potash salts. Coal, copper, sulphur, and oil deposits are reported to exist but the true extent of the mineral resources remained problematical in 1935.

Foreign Trade. Available foreign trade statistics cover only the main trade routes through Djibouti, the Anglo-Egyptian Sudan, and British Somaliland. In 1934 the imports and exports over these routes were valued at 1,009,451 and 963,917 £ sterling, respectively. About 80 per cent of the total trade passed over the French-controlled railway from Addis Ababa to Djibouti. The principal imports were salt, cotton sheetings and other textiles, building material, sugar, and glassware. The bulk of this trade was in Japanese hands. Coffee, hides and skins, wax, civet, and native butter were the chief exports.

Finance. Government revenues in normal times were estimated at from \$5,000,000 to \$7,000,000 annually, the bulk representing payments in kind.

Barter was the prevailing method of trade, but the Maria Theresa silver thaler (dollar) was the chief monetary unit. Violent fluctuations of the thaler caused by the rise in silver prices in 1935 led the government to stabilize the bank exchange rate artificially at 2.75 Maria Theresa thalers to the American dollar. The former Bank of Abyssinia, enjoying a banking monopoly of the country, was taken over by the state in 1931 and reorganized as the state Bank of Ethiopia.

Communications. The only railway in the country is the French-owned line extending 487 miles from Djibouti to Addis Ababa. By the Franco-Italian agreement of Jan. 7, 1935, Italy received 2500 out of the 34,000 shares in the railway company. In 1935 there were 2730 miles of roads of which about 65 miles were macadam, 1200 miles were of earth or gravel, and the remainder were mere trails. There were 383 automobiles in the country. Telegraph lines extended from Addis Ababa to Massawa in Eritrea. Telephone lines, linking the capital with the chief Ethiopian cities and with Djibouti and Massawa, aggregated about 5113 miles.

Government. Ethiopia remained an absolute monarchy of the feudal type until July 16, 1931, when the Emperor proclaimed a constitution establishing a unified state with two nominated assemblies to advise the Emperor's government. The first parliament, which convened in November, 1932, consisted of a Senate of 27 members chosen from hereditary chiefs of the various provinces and a Chamber of Deputies of about 40 members named by the Emperor from minor military officers and provincial leaders. There was an Imperial Council, divided into a Supreme Council (the Emperor and two princes), a Council of (10) Imperial Advisers, and the officers of the Court. The Emperor acted as his own Prime Minister.

HISTORY

The threatening developments between Italy and Ethiopia in East Africa during 1934 (see 1934 YEAR BOOK, p. 219) proved to be the prelude to a mighty drama which involved not only the independence of Ethiopia and the stability of the Fascist régime in Italy but also the fate of the League of Nations and the future of Europe. The year 1935 witnessed the completion of Mussolini's diplomatic and military preparations for the conquest of Ethiopia; the efforts of the League powers, led by Britain, to check Italy; the launching of the Italian attack on October 3 and the accompanying Anglo-Italian crisis in the Mediterranean; and the application for the first time in history of the economic and financial sanctions provided for in Article XVI of the League Covenant against an aggressor nation. The outcome of these developments was still in doubt at the close of the year. But already Mussolini's Ethiopian adventure had precipitated the realignment of diplomatic and military forces throughout Europe. It seemed evident that that harassed continent had been launched upon a path which might lead either to the consolidation of peace on the basis of collective resistance to aggression or to another Armageddon.

Preparations for War. Diplomatic preparations for Italy's attempted seizure of Ethiopia date from the Treaty of Ucciali of 1889 between Italy and the Emperor Menelik. On the basis of this treaty Italy announced that it had established a protectorate over the black empire. The attempt to enforce this claim was shattered by Menelik at the Battle of Adowa in 1896. The Rome Govern-

ment did not renounce its interest in Ethiopia, however, and in a series of agreements with France and Great Britain marked out a sphere of influence there which it was to occupy in the event of the breakup of the native empire. The most important of these understandings were the Tripartite Agreement of 1906; the secret Treaty of London of 1915 by which Italy was promised compensation in Ethiopia and other parts of Africa for joining the side of the Allies in the World War; and the Anglo-Italian agreement of 1925. Meanwhile Mussolini had strongly supported Ethiopia's admittance to the League of Nations in 1923 against British objections. In 1928 he concluded a 20-year pact of friendship and arbitration with Ethiopia, a supplementary convention to which authorized Italy to construct a motor road from Dessie in northeastern Ethiopia to the Italian port of Assab in Eritrea.

Throughout this period the imperialistic rivalries of France, Britain, and Italy in Ethiopia had proved an even more potent bulwark of Ethiopian independence than the obstacles to foreign aggression interposed by the rugged terrain, the climate, and the fighting spirit of the native tribes. French guns and ammunition had helped to defeat the Italians at Adowa. Each move by any one of the three rival powers to obtain a predominant position in Ethiopia had been checkmated by the others. But by the beginning of 1935 the way seemed open for Italy to move without great danger of arousing the opposition of either France or Great Britain. A series of Anglo-Italian conventions, culminating in that of 1925, had recognized Italy's prior claims over practically all of Ethiopia except the region around Lake Tsana where rise the headwaters of the Blue Nile. Then on Jan. 7, 1935, France and Italy, obsessed by a common fear of resurgent Germany, buried their mutual enmities and struck a bargain under which Italy received territorial and other compensation in North and East Africa in return for her support of French policy in Europe.

The only agreement concerning Ethiopia that was made public was the concession to Italy of 2500 out of the 34,000 shares in the French-owned Djibouti-Addis Ababa railway. Subsequent events appeared to substantiate the widely-published charge that Mussolini and Foreign Minister Laval at their Rome meeting reached a secret understanding which was interpreted by Il Duce as giving him a free hand in Ethiopia. M. Laval denied before the Foreign Affairs Committee of the French Chamber on June 19, 1935, that he had made such an agreement. But in the meantime Mussolini had decided to gamble the future of his régime on a campaign to subdue Ethiopia, confident that the perilous state of Europe, if not his understandings with Britain and France, would prevent any effective interference with his plans. It was clear that he anticipated nothing more significant than moral protests from the League of Nations and the signatories of the Kellogg-Briand Pact, although under both of these peace pacts Italy was bound to respect Ethiopian independence and to use nothing but peaceful means in the settlement of disputes with the African empire.

As early as July, 1934, Mussolini had sent Marshal Pietro Badoglio and an Italian military commission to Eritrea to report on the prospects for an invasion of Ethiopia. In the last months of 1934, Italian reinforcements and war material for the colonial forces in Eritrea and Italian Somali-

land began to flow through the Suez Canal. Evidently by Jan. 7, 1935, when the Franco-Italian agreement was concluded at Rome, the preparations for an Ethiopian campaign were already well under way. On Jan. 16, 1935, Mussolini transferred Gen. Emilio de Bono, the Minister of Colonies and a strong advocate of expansion in Ethiopia, to the newly created office of High Commissioner for Italian East Africa. Thereafter the movement of troops to East Africa swelled rapidly, a hospital and supply base was developed on the island of Rhodes, and the construction of barracks and military highways in Eritrea and Somaliland was speeded up. With the cessation of the rains in Ethiopia, everything was ready for the great offensive of October 3.

The Ualual Incident. Meanwhile a pretext for the Italian invasion had been found in the clash of Dec. 5, 1934, between Italian colonial troops occupying Ualual in Ogaden and the Ethiopian military escort of an Anglo-Ethiopian boundary commission. Ethiopia charged that the Italian troops had occupied Ethiopian territory and precipitated hostilities, but offered to arbitrate the dispute in accordance with the Italo-Ethiopian arbitration treaty of 1928. Italy declared that Ualual was in Italian Somaliland. It asserted that the clash there was "the most recent of a lengthy series of attacks carried out . . . with a view to disputing, by means of threatening acts, the legality of the presence of Italian detachments in certain frontier localities." Demanding reparation for this "unexpected aggression," Italy refused to submit the dispute to arbitration. The Ethiopian Government replied that Italy was pursuing a policy of gradual encroachment on the Ogaden (southeastern Ethiopian) frontier. On Jan. 3, 1935, it placed the dispute before the League Council by invoking Article XI of the Covenant.

On January 29 a new clash occurred at Afduh, near Ualual, in which five native soldiers of the Italian forces were killed. Mussolini then mobilized two regular army divisions on February 10 and announced several days later that Italy was prepared to spend \$850,000,000 in a two-year campaign to obtain "complete satisfaction" from Ethiopia. It was claimed that these preparations were for the defense of the East African colonies against Ethiopian raids and that they were inspired by the "aggressive spirit" displayed by Emperor Haile Selassie and his subjects. Ethiopia immediately requested the League to take steps to halt these military preparations.

The Efforts at Settlement. The period from January to October was marked by feverish Ethiopian efforts to secure outside help in checking the anticipated Italian invasion. At the same time Italy strove unceasingly to prevent the intervention of third parties in the dispute. The negotiations which preceded the outbreak of war in October took various forms. First of all the commission of conciliation and arbitration provided under the Italo-Ethiopian treaty of 1928 attempted to settle the responsibility for the clash at Ualual. After many delays and obstructions by the Italian members, the commission was finally constituted under pressure of the League Council and on September 4 unanimously reported that neither Italy nor Ethiopia was responsible for the incident. The action of this commission had little significance other than serving as an excuse for the postponement of action by the League of Nations while Italy completed its military preparations. Its report forced Italy to withdraw its

claims for an apology and indemnity for the Ualual incident. But Italy at no time considered canceling her more ambitious demands upon Ethiopia.

By far the most important negotiations for a settlement were carried out by the League Council or by Britain, France, and Italy acting on behalf of the Council. These negotiations are described in detail in the article LEAGUE OF NATIONS (q.v.). It suffices here to summarize the most important steps taken to secure a settlement through the League. Despite repeated Ethiopian pleas for action and the invocation of Articles X, XI, and XV of the Covenant, the League Council declined to intervene until May 25, when it formally assumed jurisdiction over the dispute, although leaving the negotiations to the Italo-Ethiopian Conciliation Commission. It took no action to halt Italy's war preparations, nor did it heed Ethiopia's request of June 20 that it send neutral observers to watch developments on the Ethiopian-Italian frontiers.

Late in June Britain made a single-handed effort to satisfy Mussolini's ambitions. She proposed the cession to Ethiopia of the port of Zeila in British Somaliland in compensation for Ethiopian concessions to Italy of tracts for the developments of cotton and coffee plantations and the right to build a railway through Ethiopia linking Eritrea and Italian Somaliland. Mussolini rejected the offer, however. Accordingly the Council on July 25 delegated Britain, France, and Italy to negotiate a new settlement. Representatives of the three governments met in Paris from August 14 to 18. The French and British members drew up a plan giving Italy a predominant economic position in Ethiopia subject to Haile Selassie's consent and the political control of the League of Nations. France and Britain were to subscribe a loan for the economic development of Ethiopia and Italy was to carry out the projects agreed upon and to nominate foreign advisers and administrators at Addis Ababa. Rejecting this proposal, Mussolini demanded outright annexation of the Ethiopian lowlands, a protectorate over the remainder of the country, and the military occupation and disarmament of all Ethiopia to guarantee the security of the adjacent Italian colonies.

By the time the Council reconvened on September 4, 200,000 Italian troops had been concentrated in East Africa at a financial cost which definitely committed Mussolini to carry forward his adventure. The Italian representative informed the Council that his government reserved "full liberty to adopt any measures that might become necessary to ensure the safety of its colonies and to safeguard its own interests." Urgent Ethiopian requests for the application of Article XV of the Covenant led the Council on September 6 to appoint a committee, on which Spain, Britain, France, Poland, and Turkey were represented, to study new proposals for a settlement. On September 18 the committee submitted another plan for League assistance to Ethiopia under which Italy would be assured of economic opportunities there as well as of the security of her citizens in Ethiopia and of her adjoining colonies. Supplementing this plan, the French and British representatives announced that their governments were prepared to recognize "special Italian interest in the economic development of Ethiopia" and to assist territorial adjustments between Italy and Ethiopia by granting Ethiopia territories on the Somaliland coast, which would afford her an outlet to the sea.

The committee's suggestions were accepted by Ethiopia as a basis of negotiation but were rejected by Italy. On September 28 Emperor Haile Selassie, in view of the continual dispatch of Italian reinforcements and other preparations, proclaimed general mobilization. On October 3, coincident with the invasion of Ethiopia, Italy informed the Council that "the warlike and aggressive spirit in Ethiopia had succeeded in imposing war against Italy. . . ." The Council thought otherwise. On October 7 it formally proclaimed Italy the aggressor and inaugurated steps leading towards the application of economic and financial sanctions. See LEAGUE OF NATIONS.

During these months while the war was being hatched, Haile Selassie made several moves to secure the aid of other powers in frustrating Mussolini's ambitions by offering them attractive concessions. On May 10, 1935, he invited the British, Egyptian, and Anglo-Egyptian Sudan governments to attend a conference at Addis Ababa for the purpose of concluding an agreement for the construction of a dam at Lake Tsana. Such an agreement, enabling regulation of the flow of the Blue Nile in a manner highly beneficial to the Sudan and Egypt, had long been sought by Britain. It now favored postponement of the conference in order not to irritate the Italians during such a critical time. Nevertheless it was reported from Cairo on June 1 that an agreement for the construction of the Tsana dam had been virtually completed. In fact the Egyptian Cabinet on May 22 approved an appropriation for construction of the Tsana barrage.

A similar motive undoubtedly inspired the Emperor's concession to the British promoter, Francis M. Rickett, of the exclusive right to exploit oil and mineral deposits throughout 150,000 square miles of territory in Ethiopia, most of it in regions threatened by Italian invasion. The disclosure of this concession on August 30 proved a boomerang, tending to discredit and weaken British opposition to Italian aims until it was revealed on September 3 through Secretary of State Hull that the real owner of the concession was the American-controlled Standard-Vacuum Oil Company. The latter concern promptly canceled the concession when its connection with the affair was revealed.

Another move made by the Emperor in his efforts to balk Mussolini was his appeal of July 4 to the U.S. Government to call to the attention of Italy its obligations under the Kellogg-Briand Pact. Secretary Hull on July 12 replied that the anti-war pact "was no less binding now than when it was entered into" and that the United States and other signatories were "interested in the maintenance of the pact and the sanctity of international commitments assumed thereby." But he made no immediate representation to Italy, although on July 13 the State Department advised the 125 American citizens in Ethiopia to be ready to leave the country on short notice.

The Military Campaigns. The Italians launched their invasion of Ethiopia from three widely separated bases. Their main army under Gen. Emilio de Bono, based upon Asmara in Eritrea, crossed the Mareb River and advanced southward upon Adowa and Makale, from which towns a rough road led southward through Dessey to Addis Ababa. A second drive was begun from Mount Mussa Ali near the border of Eritrea and French Somaliland. Faced by the terrible Danakil desert and its fierce tribesmen, this cam-

paign made little headway and up to the end of 1935 played an insignificant part in carrying out Italian aims. On the southern front two Italian divisions under Gen. Rodolfo Graziani advanced from Ualual and Gerlogubi with the object of taking Harar and cutting the Djibouti-Addis Ababa railway. They were supported by a small detachment at Dolo on the Webbe Mana near the Kenya boundary.

Realizing that mass attacks upon the heavily armed Italians would be suicidal, Emperor Haile Selassie made no effort to bring the war to an early issue. His commanders retreated slowly before the invaders, hoping to lure them deep into the extremely difficult and mountainous country where they would be forced to divide their forces and where their extended lines of communication would offer scope for the guerrilla tactics in which the Ethiopian warriors excelled. The Italians, remembering the hard lesson of Adowa, followed a cautious policy in general, advancing only after thoroughly consolidating their positions. With several notable exceptions, the war during 1935 was consequently devoid of sensational developments. In the early stages of the campaigns, the invaders used aeroplanes effectively in bombing Ethiopian bases and troop concentrations. The Italian land forces, however, were for the most part unable to follow up these initial advantages, due largely to the rugged nature of the country. The Ethiopians quickly adapted themselves to this new type of warfare, and by moving largely at night and by the use of camouflage and decoy encampments they managed to minimize the Italian striking power from the air.

A heavy air bombardment of Adowa, Adigrat, and Makale inaugurated General de Bono's offensive of October 3 against these northern cities. His troops pushed forward with but little opposition, building roads as they advanced, and on October 6 occupied Adowa, thus avenging the defeat of General Baratieri in 1896. Adigrat fell immediately afterwards and the holy city of Aksum on October 11. After this initial push, General de Bono halted to consolidate his position. It was another month before he was ready to move. His second advance carried the Italian flag to Makale, some 70 miles from the Eritrean border, which was occupied November 8. From Adowa and Makale the invaders gradually extended their control to the east and west, advancing southward as far as the great gorge of the Takkaze River.

On November 16 Premier Mussolini replaced General de Bono, apparently because of his slow progress, and named Marshal Badoglio to succeed him. Marshal Badoglio, however, did not change his predecessor's cautious policy. In mid-December it became evident that the Italian lines were already over extended. With about 100,000 troops, they were attempting to hold a front some 300 miles long in a region of towering, rugged ranges cut by deep gorges. The Ethiopians began to penetrate freely through the Italian lines and to attack outposts, camps, and supply trains in the rear. The season of "little rains," coming prematurely, destroyed many of the newly built mountain roads and made the supply problem exceedingly difficult. The growing Ethiopian pressure, reflected in a number of fairly important engagements, forced Marshal Badoglio to shorten his lines and he began a retreat which by the end of the year had surrendered approximately half of the occupied territory. Even Makale and

Adowa were menaced by several powerful Ethiopian armies operating in the vicinity.

One of the most stirring exploits in the northern campaign occurred in mid-November, when a column of Italian colonial troops under Brig. Gen. Oreste Mariotti penetrated the largely unexplored Danakil Depression from Cululli, terminus of the railway from the Eritrean port of Fatima Eri (Marsa Fatma). Continuing across the desert, the column ascended the plateau by way of the Ende gorge, where it was obliged to fight its way through a formidable Ethiopian ambush. It then continued on to Makale, where it joined the main Italian army.

General Graziani's drive from the south against Harar was slow in getting under way. His manoeuvres at first seemed primarily designed to hold as large an Ethiopian force as possible in that vicinity. By the beginning of November, however, he was ready to advance. Using mobile columns of motorized troops accompanied by swift tanks and operating in close conjunction with the air force, he achieved a notable victory in the capture of Gorahai on the lower Fafan River about November 6. This opened the way for an advance towards Harar and Jijiga, where Graziani hoped to cut off the supplies of arms and munitions entering Ethiopia via the caravan route from British Somaliland. From Gorahai he made a swift dash 120 miles up the Fafan valley to Daggah Bur, capturing the important wells at Anale and Sasa Baneh en route. Ethiopian attacks in the rear forced the flying column to retreat all the way to Gorahai, the Italians losing many tanks and trucks in a number of sanguinary engagements. A second Italian flying column advanced as far as Daggah Bur, but it was also forced to withdraw to Gabre Darre, a point a short distance north of Gorahai. As the year ended, the Italian armies there were rushing defensive works against an advancing Ethiopian army under the Turkish general, Wehib Pasha. At Dolo, to the southwest, another Italian force was preparing to resist the advance of another large Ethiopian army under Ras Desta Demtu, son-in-law of Emperor Haile Selassie. Heavy rains, combined with the effective guerrilla tactics of his opponents, had held General Graziani to inconsiderable gains up to the end of 1935.

Meanwhile Italian bombing squadrons had been actively attacking Ethiopian cities far in the interior. A large squadron of Capronis from the northern front bombed Dessye heavily on December 6 and 7. Most of the town, including the Emperor's palace, was destroyed and an American missionary hospital and Red Cross tents were hit. Planes from General Graziani's units repeatedly bombed the Ethiopian stronghold at Daggah Bur and also Filtu and other concentration points of Ras Desta Demtu's forces in the southwest. A Swedish Red Cross unit with the Ethiopian forces near Dolo was destroyed by bombs on December 30 and several of the Swedish doctors were wounded.

Hoare-Laval Peace Effort. While the military campaigns in Ethiopia were thus progressing none too favorably for Italy, the repercussions of the Italian invasion were shaking Europe to its foundations. Great Britain, which during the first months of 1935 had seemed indifferent if not acquiescent to Mussolini's plans, became alarmed after Italy's determination to establish a protectorate over the whole of Ethiopia was revealed. The British home fleet was sent to the Mediter-



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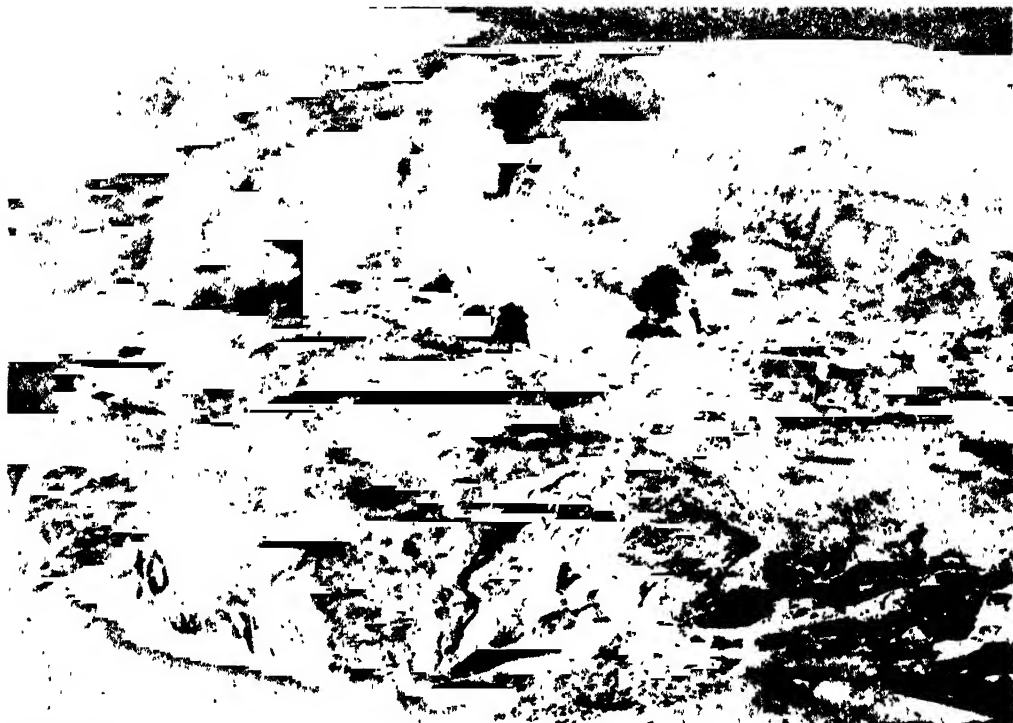
EMPEROR HAILE SELASSIE



A CHANGE IN THE ITALIAN HIGH COMMAND

Marshal Pietro Badoglio (left) arriving at Massawa, Eritrea, Nov 27, 1935, to replace Gen Emilio de Bono (right) as commander-in-chief

THE ETHIOPIAN WAR



Wide World

THE BOMBING OF DESSYE

Dessye shrouded in the white smoke of exploding bombs during Italian air raid on Dec 6, 1935



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ETHIOPIAN WARRIORS LEAVE FOR THE FRONT

Troops parading past the Emperor on the main thoroughfare of Addis Ababa

anean early in September and when Mussolini persisted in his course in Ethiopia despite this threat Europe trembled on the brink of an Anglo-Italian conflict, which was certain to involve all Europe. Feverish preparations for such an eventuality were made in Italy and in all the British possessions in the Mediterranean and the Red Sea (see EGYPT, GIBRALTAR, MALTA, and PALESTINE). The Italians concentrated several divisions of troops on the Libyan frontier in a position menacing Egypt. During the height of the Anglo-Italian crisis Britain sought and received assurance from Greece, Turkey, and Yugoslavia that they would come to her aid if Italy attacked the British fleet as a result of the application of sanctions. Later the other members of the Little Entente—Czechoslovakia and Rumania—made similar commitments (see these countries under *History*).

Meanwhile France, torn by her desire to support the League and still to retain Italy as a strong ally against Germany, attempted to reconcile Britain and Italy. Although forced to accept the League sanctions imposed against Italy and to pledge the use of her ports and fleet to Great Britain in the event of an Italian attack upon the British Mediterranean fleet, Premier Laval qualified his support and used all his influence to find a compromise solution. When Japan seized upon the tension in Europe as the opportunity for a new advance in North China (see CHINA under *History*) and Hitler likewise extended his demands, the dominant group in the British Cabinet acceded to M. Laval's proposals for satisfying Italy at the expense of Ethiopia. The result was the notorious Hoare-Laval peace proposals of Dec. 8, 1935.

As published on December 13 the plan provided for an "exchange of territories" under which Ethiopia was to cede outright 60,000 square miles in Tigre and Ogaden provinces to Italy in return for a corridor of 3000 square miles through Italian Eritrea, including the port of Assab. In addition, Britain and France agreed to support the establishment in Southern Ethiopia of an Italian zone of economic expansion and settlement totaling 160,000 square miles. Ethiopia was offered no compensation, territorial or otherwise, for the latter concession. In this zone, comprising practically the entire southern half of Ethiopia, Italy was to enjoy exclusive economic rights, to be exercised by a "privileged company" controlling all unoccupied lands and exploiting the mineral deposits, forests, and other natural resources. The company would be required to contribute to the economic "equipment" of the country and to spend part of its revenues for the benefit of the natives. The Italian zone was to remain an integral part of Ethiopia but was to be controlled by League administrative bodies in which Italy was to play "a preponderant but not exclusive rôle." Questions regarding the administration of the zone were to be handled by one of the principal League advisers "who might be of Italian nationality," and who would act as assistant to the chief League adviser at Addis Ababa. The League services in Ethiopia would seek "to insure the safety of Italian subjects and the free development of their enterprises."

The strongly unfavorable reaction to these proposals in Britain, France, and throughout most of the world forced their rejection by the League Council. In Britain Sir Samuel Hoare was obliged to resign as Foreign Secretary and the entire Baldwin Cabinet narrowly escaped repudiation (see GREAT BRITAIN under *History*). The Laval

Government narrowly survived attacks by the Left in the French Chamber (see FRANCE under *History*). The League of Nations took the negotiations out of the hands of France and Britain and placed them with a Committee of Thirteen, including the entire membership of the Council except Italy. Thus at the close of the year the League was studying a proposal to add an oil embargo to the list of economic and financial sanctions imposed against Italy by 50 or more League states beginning November 18. The cost of the Ethiopian adventure both in the expenditure of men and money in Africa and in the loss of trade through League sanctions already constituted a heavy burden upon the Italian people. See ITALY under *History*.

Death of Lij Yasu. An important event in Ethiopian history during the year was the death late in November of Lij Yasu, the former Moslem King of Ethiopia, who was deposed in 1916 by a coalition of the great rases (feudal princes) under the leadership of Ras Tafari (who later became the Emperor Haile Selassie) and Zaiditu, the eldest daughter of the Emperor Menelik. Lij Yasu had been held prisoner since his capture in 1921 and it was intimated that his premature death may have been due to reports that the Italians were planning to free him and use him as a tool to establish their sway over the country.

See ARABIA under *History*.

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ETHNOGRAPHY. See ANTHROPOLOGY.

EUCCHARISTIC CONGRESS, SEVENTH NATIONAL. See ROMAN CATHOLIC CHURCH.

EVANGELICAL AND REFORMED

CHURCH, THE. A denomination formed by the merger in Cleveland, Ohio, on June 26, 1934, of the Evangelical Synod of North America and the Reformed Church in the United States. The former was formed at Gravois Settlement, Mo., in 1840 by representatives of the Evangelical Churches of Germany and Switzerland. The latter traced its origin chiefly to the German, Swiss, and French Protestants who settled in America early in the 18th century. Both churches, in doctrine and polity, were akin to the other Reformed bodies.

The highest judicatory of the Evangelical and Reformed Church is the general synod, which will meet biennially. At the Cleveland session the Rev. George W. Richards, D.D., president of the Theological Seminary of the Reformed Church in the United States at Lancaster, Pa., was elected president. The other officers were: Vice-presidents, the Rev. Louis W. Goebel of Chicago, Ill., the Hon. D. J. Snyder of Greensburg, Pa., and J. C. Fischer of Evansville, Ind.; stated clerk, the Rev. J. Rauch Stein, D.D., of Philadelphia, Pa.; associate stated clerk, the Rev. F. A. Meusch of New Albany, Ind.;

treasurer, F. A. Keck of St. Louis, Mo.; associate treasurer, Milton Warner, Philadelphia, Pa.

Previous to the merger the Evangelical Synod of North America reported 1249 congregations, 1191 pastors, and 263,411 members and the Reformed Church in the United States, 1607 congregations, 1334 ministers, and 345,912 communicant members. The local budgets of these congregations will total more than \$8,000,000 for all purposes, their allotment for benevolence exceeding \$1,600,000. The new denomination will continue the work of the Evangelical Synod of North America in India and Honduras and of the Reformed Church in the United States in Japan, China, and Iraq. It also will support more than 300 home mission churches and six special projects among English, German, Czech, and Hungarian immigrants, the Japanese of California, and the Indians of Wisconsin. Of its 11 educational institutions the more important are the Theological Seminary at Lancaster, Pa.; the Eden Theological Seminary at Webster Groves, Mo.; Elmhurst College at Elmhurst, Ill.; Franklin and Marshall College at Lancaster, Pa.; Ursinus College at Collegeville, Pa.; Cedar Crest College at Allentown, Pa.; Hood College at Frederick, Md.; Catawba College at Salisbury, N. C.; and Heidelberg University at Tiffin, Ohio. In addition it will administer 32 benevolent institutions. The principal periodicals are the *Evangelical Herald* and the *Reformed Church Messenger*.

Though the Evangelical and Reformed Church is functioning through its officers and the executive Committee, the Evangelical Synod being an incorporated body has to maintain its corporate entity until such time as the constitution of the new church can be filed with the proper authorities. Rev. F. C. Klick continues to function as president and together with the board of directors attends to all necessary business.

Rapid progress is being made in the merger process. The draft of the constitution is printed and will be submitted to all spring conferences in both groups. The work of the various boards is being coordinated so as to facilitate complete merger after final adoption of the constitution. Joint headquarters are in the Schaff Building, 1505 Race Street, Philadelphia, Pa., and Evangelical Synod Building, 1720 Chouteau Avenue, St. Louis, Mo.

EVANGELICAL CHURCH. A denomination formed by the reunion in 1922 of the Evangelical Association and the United Evangelical Church. (For historical details, see the *NEW INTERNATIONAL ENCYCLOPEDIA*, viii, page 202, and xxii, page 661.) In 1935 it had 24 conferences in the United States and Canada, 1 in Japan, 3 in Germany, and 1 in Switzerland, its membership throughout the world totaling 272,451. In the United States and Canada there were 233,792 members, enrolled in 2046 churches. Of the 2537 churches throughout the world 1892 were served by itinerant preachers and 434 by local preachers. The 2705 Sunday schools had an enrollment of 359,365. Working under the general direction of the board of missions were 1496 women's missionary societies, with a membership of 14,607. The total value of all church property in the United States and Canada was \$33,390,190, while the amount of money raised during the year was \$4,263,887.

The chief schools of the denomination are: North Central College and the Evangelical Theological Seminary at Naperville, Ill.; Western Union College at Le Mars, Iowa; Albright College and the Evangelical School of Theology at Reading, Pa. It also maintains two orphanages and five old people's

homes in the United States, as well as several hospitals. Official periodicals are the *Evangelical-Messenger* and *Der Christliche Botschafter*. A quadrennial general conference was held in Akron, Ohio, Oct. 5, 1934. In their episcopal message to this conference the bishops of the church castigated the American economic system, the movies, and the liquor traffic. All questions of law in the interval between general conference sessions are decided by the board of bishops, which in 1934 consisted of Bishops J. S. Stamm, G. E. Epp, F. W. Praetorius, and C. H. Stauffacher. Headquarters are at the Evangelical Press, 1900 Superior Avenue, Cleveland, O., and in Harrisburg, Pa.

EVOLUTION. See ZOOLOGY.

EWING, SIR (JAMES) ALFRED. A Scottish physicist and engineer, died at Cambridge, England, Jan. 7, 1935. Born at Dundee, Scotland, Mar. 27, 1855, he received his education at the Dundee High School and the University of Edinburgh. For several years he served as assistant to Lord Kelvin and Prof. Fleming Jenkins, and in 1878 was appointed professor of mechanical engineering in the Imperial University of Tokyo. While in Japan he devoted himself assiduously to the study of earthquakes, devising seismographs to record the earth's vibrations during such disturbances. In 1883 he resigned to become a professor of engineering in University College, Dundee, and from 1890 to 1903 he occupied the chair of professor of mechanism and applied mechanics at the University of Cambridge. In the following year he became Rede lecturer at Cambridge, and from 1903 to 1916, was Director of Naval Education to the British Admiralty. He served as a member of the Explosives Commission, 1903-06, and as a member of the Ordnance Research Board, 1906-08. In 1916 he accepted the post of principal and vice chancellor at the University of Edinburgh, serving until 1929. From 1924 to 1928 he was chairman of the Bridge Stress Committee and from 1929 to 1934 of the Committee on the Mechanical Testing of Timber. During the World War, Sir Alfred was in charge of "Room 40" of the Admiralty Office and head of the British government's staff of cipher experts. In 1933 he sought permission to write about "Room 40" in his reminiscences but the permission was refused.

During the course of his career he was the recipient of many honors and received honorary degrees from leading universities. For his researches in magnetism he was given the Royal Medal in 1895, and in 1907 was made a Companion of the Bath and Knight Commander in 1911. In 1929 he received the Albert Medal and the freedom of the City of Edinburgh, and in 1933, the freedom of the city of Dundee. He served as president of the British Association in 1932 and as president of the Royal Society of Edinburgh from 1924 to 1929.

Sir Alfred was the author of a treatise on *Magnetic Induction in Iron and Other Metals* (1891), a work which followed a series of researches in the various phenomena of magnetism published in the *Philosophical Transactions* and the *Proceedings* of the Royal Society, for which he was awarded their Royal Medal. He invented a magnetic curve tracer, a hysteresis tester, and a permeability bridge, which are used by electrical engineers and steel makers in testing the iron employed in the construction of dynamos and transformers. His work on earthquakes resulted in the publication of *Earthquake Measurement* by the University of Tokyo in 1883, and other papers by the Seismological Society of Japan. Also, he wrote: *The Steam*

Engine and Other Heat Engines (1894); *The Strength of Materials* (1899); *The Mechanical Production of Cold* (1908); *Thermodynamics for Engineers* (1920); and *An Engineer's Outlook*, autobiography (1933).

EXPEDITIONS. See ANTHROPOLOGY.

EXPLORATION. The outstanding feat of exploration during 1935 was Lincoln Ellsworth's flight across the Antarctic Continent. This and other explorations in polar regions are described in the article POLAR RESEARCH. For the record of anthropological and archaeological discoveries during the year, see the articles ANTHROPOLOGY and ARCHAEOLOGY. Also see GEOGRAPHICAL SOCIETY, AMERICAN; GEOGRAPHIC SOCIETY, NATIONAL.

Africa. The eastern part of the Libian Desert was again explored by a British motor caravan which left Cairo, Egypt, in January and returned early in April after covering 6500 miles, of which 3000 miles was previously unexplored. The party was headed by W. B. Kennedy Shaw and included Lieut. R. N. Harding Newman, M. H. Mason, R. E. McEuen, and Col. and Mrs. G. A. Strutt. From Dakila Oasis they traversed the Gifl Kebir Plateau, discovering ancient paintings in a cave in the southeast corner of the plateau. The Wadi Hawa was then explored from the frontier of French Equatorial Africa to its end some 250 miles to the east. The green valley was swarming with game, although the expedition found no evidences of water. The expedition lost one of its members—Colonel Strutt—who died in Khartoum from injuries sustained when he fell from a moving car.

The Tafassaset Valley, extending 900 miles through the Sahara Desert, was mapped by a French Army officer. Studies made by Prof. E. P. Stebbing of Edinburgh University along the southern edge of the same desert indicated that it was moving southward at the rate of half a mile annually. The Armand Denis Belgian Congo Expedition under the auspices of the Belgian Government entered the Congo by way of Morocco and filmed wild life in Albert National Park. Part of the expedition under Lelia Roosevelt Denis continued on to Capetown. Mrs. Violet Cressy-Macks, an Englishwoman, made the first trip by motor truck from Addis Ababa, the Ethiopian capital, to Nairobi, in Kenya.

Asia. Dr. Sven Hedin returned to Nanking, China, in April, 1935, from his expedition to Sinkiang Province (Chinese Turkestan). Commissioned by the Nanking Government to survey routes for a motor highway to Sinkiang which would enable Nanking to maintain its hold on that distant territory, Dr. Hedin left Peiping in October, 1933, and traveled west by caravan from Palingmiao, Inner Mongolia, across the southwestern salient of the Gobi Desert to Hami, Urumchi, and Korla in Sinkiang. He then returned by a southern route through Tunghwang, Yumenn, Suchow, Kanchow, Liangchow, and Sian. The expedition had a number of dangerous encounters with rebellious forces in Sinkiang. An equally hazardous 3500-mile trip across western China, northern Tibet, and Sinkiang to Srinagar in Northern India was made by the English author, Peter Fleming, and Mlle. Ella Maillart, a Swiss traveler. Leaving the railroad at Sian, capital of Shensi Province, in the middle of February, 1935, they followed difficult and little-known routes through Lanchow, Sining, Dzun, Teijinar, Cheren, Khotan, and Kashgar to the Indian frontier, arriving at Srinagar September 12.

Arthur S. Vernay and Suydam Cutting, both

trustees of the Museum of Natural History, New York, made extensive collections of rare plant and animal life in the Tibetan Himalayas. Dean Sage, Jr., collected animals, including a giant panda, in western China for the same museum. A party under Brooke Dolan 2d explored little-known territory in eastern Tibet and collected many rare birds and mammals for the Academy of Natural Sciences, Philadelphia. Prof. Nicholas Roerich completed his task of collecting drought-resistant grasses and plants in the Gobi Desert for use by the U.S. Department of Agriculture in re-grassing wind-eroded lands in the arid plains of the American West. A new tribe of pygmies was reported discovered in the mountains of Annam, French Indo-China, by Dr. Pierre Trehout.

The Himalayas attracted fewer mountain-climbing expeditions in 1935, but two ambitious projects were in preparation for 1936. An international group under Prof. G. O. Dyhrenfurth climbed the Queen Mary and Golden Throne peaks, which are among the highest in the world. The English Mount Everest Committee laid plans for another major effort to climb the world's highest summit during 1936. An advance expedition to lay bases and reconnoitre approaches to the mountain was in the field in 1935. The main party, under Hugh Ruttledge, was to start the following spring. Another international group under Dr. Karl Wien planned to renew the assault upon Nanga Parbat. A similar attempt in 1934 cost the lives of 3 Europeans and 6 porters.

North America. Unexplored or little known regions of the Canadian Rockies and the coast ranges of British Columbia and Alaska again attracted a number of expeditions. The riddle of what happens to the Rockies to the north of the sixtieth parallel, where the Laird River cuts across them was solved by a small party under Dr. Charles Camshell, Canadian Deputy-Minister of Mines, which crossed this region in a 4000-mile aeroplane flight from Prince Rupert, B. C., to Edmonton, Alberta. The group reported that the mountains died down in a plateau north of the Laird River.

The National Geographic Society's Yukon Expedition, led by Bradford Washburn, made the first crossing of the St. Elias Range from the Yukon to Alaska and mapped 2000 square miles of territory by aeroplane. Two newly discovered peaks in the southwestern part of Yukon Territory were named King George and Queen Mary, respectively, and a 40-mile glacier was named after Dr. A. Lawrence Lowell, former President of Harvard University. W. A. Wood, Jr., led an expedition sponsored by the American Geographical Society to the same region and succeeded in scaling Mt. Steele. The Rev. B. R. Hubbard, head of the geology department of the University of Santa Clara, continued his investigations of the Alaskan ranges, paying special attention to the depth of the glaciers. An expedition headed by Harry Snyder of Chicago made a 7000-mile trip through northwest Canada, securing animal specimens for the American Museum of Natural History, New York, and the Canadian National Museum in Ottawa. It bagged specimens of a rare black-tailed white sheep and of a little-known race of northern elk.

In the United States, the major work was carried on by the National Park Service, whose expeditions surveyed and explored a 200-mile canyon on the San Juan and Colorado rivers and mapped 3000 square miles of territory. Another party headed by P. J. Shenon and J. C. Reed of the U.S. Geological Survey and sponsored by the

National Geographic Society, descended the difficult canyon of the Salmon River in Idaho on a radio-equipped scow. The river had already been fully explored, but motion pictures of the deep canyon were made and geological studies carried out. Discovery of a cataract in the Chirripo Mountains of Costa Rica having a drop of over 1000 feet was reported by P. Rogers, a nephew of Will Rogers.

Oceania and East Indies. The discovery in 1933 of a previously unknown people in the interior of North Eastern New Guinea by officials of the Australian administration in that mandated territory (see 1934 YEAR BOOK, p. 221) was supplemented in 1935 by the discovery of another allegedly unknown race of about 100,000 people living in a high, inaccessible valley in the adjacent territory of Papua, a dependency of Australia. The discovery was reported by Jack Hides, an assistant resident magistrate who led a patrol on an eight-months' trip through the region to the south of Mount Hagen. He said the tribe lived in a valley walled off by 7000-foot limestone cliffs from the surrounding region. The inhabitants were described as distinct from the previously unknown race discovered in 1933. Short, brown-skinned people of Asiatic type, they had a highly developed agriculture and differed from the Papuans in that they had no villages, each family dwelling upon and tilling its own tract of land. Veteran prospectors in New Guinea discounted Mr. Hides' report, stating they had previously encountered the same tribes which he described. Lord Moyne and a party on board his yacht *Rosaura* visited parts of Netherland India where civilization had not yet penetrated and some of the islands to the east and southeast of New Guinea. Mr. and Mrs. Martin Johnson started on an 18-months' expedition into central Borneo, and G. M. Dyott led a party into the interior of New Guinea.

Several parties were active in the South Pacific. The Templeton Crocker Pacific Expedition returned from a 19,000-mile voyage in that region during which birds and plants were collected for the American Museum of Natural History and anthropological studies made of the inhabitants of Pitcairn and Easter Islands. The Whitney South Sea Expedition also completed six years' work among the islands of the Pacific for the American Museum of Natural History. Archaeological studies on Easter Island were made by Dr. Henri Lavachery of the Belgian Royal Museum of Art and History. Another group under Dr. Dana Coman of Johns Hopkins University studied the marine and plant life of Jarvis, Howland, and Baker Islands in the South Pacific.

South America. A search for Paul Redfern, American flier who disappeared in 1927 while crossing north central South America on a flight from the United States to Rio de Janeiro, was inaugurated in December, 1935, by an aeroplane expedition financed by Edward Sill, a merchant of Georgetown, British Guiana. Rumors from the jungle had indicated that Redfern, injured in the crash of his plane, was living with an inaccessible Indian tribe. With pilots Art J. Williams and Harry Wendt at the controls, flights in search of Redfern were begun from Wanotoba near the source of the Corentyne River on December 8. The river rises in Brazil and flows between British and Dutch Guiana.

Several other exploring expeditions were active in the same region. Two parties under Vice-Adm. C. C. Kayser and Capt. Braz Dias de Aguiar com-

menced the three-year task of mapping the boundary between Surinam (Dutch Guiana) and Brazil. Explorations in British Guiana by Capt. Irving Johnson led to the discovery of a waterfall three times as high as Niagara, he reported. Dr. S. H. Williams of the University of Pittsburgh headed another expedition to British Guiana which spent five months searching for the legendary "lost world," supposed to exist on an inaccessible plateau. The Heye Foundation, Museum of the American Indian, sent Capt. R. S. Murray to British Guiana to study four Indian tribes and an expedition under Capt. Eric Loch to investigate the little known Ssabela Indians on the Upper Amazon. The latter party crossed the Andes in Ecuador and descended the Villano River by canoes to the Ssabelas territory. All the members of the expedition were reported to have suffered from malaria and dysentery. Dr. V. M. Petruccio renewed his studies of the Goajiro Indians of Colombia under the auspices of Columbia University and the Latin-American Institute.

EXPORTS. See AGRICULTURE.

EXTRADITION. See INTERNATIONAL LAW.

EXTRATERRITORIALITY. See INTERNATIONAL LAW.

FALKLAND ISLANDS. A British crown colony, consisting of East Falkland, West Falkland, and adjacent islands. Area, 4618 sq. miles; population (1934), 2437. Stanley, the capital, had 1200 inhabitants in 1934. Sheep farming was the main industry. Wool, tallow, hides and sheepskins, and seal oil were the main exports. In 1934, exports were valued at £142,714; imports, £91,947; revenue, £102,700; expenditure, £54,464. Government was vested in a governor assisted by an executive council of 4 members and a legislative council of 6 members. Governor and Commander-in-Chief in 1935, H. Henniker-Heaton.

Dependencies. The dependencies of the Falkland Islands include South Georgia (1094 sq. m.; population, 650 including 4 females), South Shetlands, South Orkneys, South Sandwich Islands, and Graham Land. Whaling was the main occupation. From the 1575 whales caught during the 1934-35 season, 108,261 barrels of oil and 9,107,300 kilograms of guano were produced. In 1934, imports were valued at £204,854; exports, £455,468; revenue totaled £45,576; expenditure, £14,892.

FAR EASTERN AREA. See SIBERIA.

FARM CREDIT ADMINISTRATION.

See UNITED STATES under Congress; AGRICULTURE.

FARM REAL ESTATE. See AGRICULTURE.

FAROE, fār'ō or fār'ō, ISLANDS. A group of 21 islands between Scotland and Iceland, forming a county of Denmark. The main islands were Børdø, Kalso, Osterø, Sando, Strömø, Suderø, Vaago, and Viderø. Total area, 540 sq. miles; population (1930), 24,200. Capital: Thorshavn (3200 inhabitants), on the island of Strömø.

Government. Administration was under a prefect named by the King of Denmark. The local parliament (Lagting) of 21 members, elected for four years, elects a representative to the Danish Landsting (upper house). The people elect, by vote, a member to the Danish Folketing (lower house).

FASCISM. The wave of fascism which engulfed Germany and Austria in 1933 and spread over Bulgaria and Latvia in 1934 appeared to be definitely on the wane during 1935. It was true that Fascist principles had made definite gains, especially among German-speaking peoples such as those of the Saar, Danzig, Memel, and the

German districts of Czechoslovakia. But these gains had been more than offset by the rebuffs dealt to arbitrary government on every hand.

Perhaps Fascism suffered its greatest blow during 1935 in the land of its origin—Italy. By launching his people upon an expensive and difficult adventure in Ethiopia in cynical disregard of solemn treaties and at the cost of a world-wide economic boycott, Mussolini seriously weakened the moral and material position of fascism among his own as well as other peoples. Students of the situation agreed that the stability of the Fascist régime in Italy depended upon the successful outcome of the fighting in Ethiopia. At the end of 1935, however, the prospects of the Italian invaders looked none too bright. See ETHIOPIA and ITALY under *History*.

Through 1934 and most of 1935 France appeared to be drifting rapidly towards a Fascist dictatorship under Col. François de la Rocque's Croix de Feu. But in 1935 the powerful Radical Socialists joined the Communist-Socialist united front against fascism which had been formed in 1934. The so-called United Front displayed its vigilance by several huge demonstrations in Paris during the year. Its parliamentary strength was revealed by the passage of a bill requiring the disarmament of the Croix de Feu. The strength of the Left, again demonstrated in the French elections, appeared to have definitely eliminated a Fascist dictatorship as an immediate menace. A similar trend was observable in Spain, where the Socialists, Communists, Syndicalists, and Left Republicans formed a strong united front organization in preparation for the forthcoming 1936 elections. In Great Britain, the Irish Free State, and the other democratic countries of northwestern Europe, the various Fascist movements which had formerly aroused widespread alarm had declined to relative insignificance. Exceptions to this rule were to be observed in Belgium, where extremists in both the rival Flemish and Walloon factions had adopted Fascist programmes based upon the idea of racial dictatorship. The Flemish Fascists, as well as those in the Netherlands and the Scandinavian countries, were charged with receiving subsidies and orders from the Hitler régime in Germany.

Other setbacks to fascism during the year were the overthrow of the dictatorship in Bulgaria by King Boris and the death of Marshal Pilsudski, for many years dictator of Poland. In Greece Marshal George Kondylis overthrew the republic on October 10 and established himself temporarily as regent and virtual dictator. His aspirations to play the rôle of Mussolini in Greece were frustrated, however, by the firm stand in favor of constitutional government taken by King George II following his restoration on November 25. Yugoslavia, whose King-dictator had been assassinated Oct. 9, 1934, made marked progress towards the development of popular and constitutional rule during 1935.

The *New York Times*, editorially surveying the course of the struggle between arbitrary and democratic government during 1935, reported that the United States had experienced "a marked revival of what we had always regarded as democratic aspiration and practice." The demand for greater vitality and reality in State governments had been encouraged by decisions of the Supreme Court. On the other hand a number of liberal agencies and organizations, such as the Civil Liberties Union and the Methodist Federation for

Social Service, as well as radical spokesmen such as Norman Thomas, gave repeated warnings that a strong trend toward fascism was evident in the United States. Senator Huey Long of Louisiana and Father Charles Edward Coughlin, the Detroit radio priest, were widely attacked as the leading exponents of American fascism. The death of Senator Long (q.v.) from an assassin's bullet cut short his spectacular career. The spread of teachers' oath bills and other anti-liberal measures was regarded as further evidence of Fascist tendencies.

In Brazil, Argentina, and Chile, where the struggle for popular government and for the abolition of semi-feudal economic conditions had the ruling land-owning aristocracies on the defensive, there was a marked growth of frankly Fascist groups, who threatened to overthrow the existing governments as well as to abolish liberalism and radicalism as political forces. The death of President Gomez of Venezuela on December 17 ended his long and exceedingly arbitrary dictatorship and was the signal for demonstrations in favor of popular rights and popular government. Mexico's Fascist Gold Shirts clashed with Leftists before the National Palace on November 20, the broil costing five lives and wounds to 34.

In the Far East the struggle between the advocates of arbitrary and constitutional government proceeded with great intensity, particularly in Japan, where the issue of expansion in China and war with the Soviet Union hung on the issue. In general during 1935 the civilian forces, with the aid of the more moderate element in the army and the Emperor, held the radical Japanese militarists in check. But the latter were by no means reconciled to this. In China Gen. Chiang Kai-shek strengthened his dictatorship during 1935 by securing his election as chairman of the Executive Yuan. His opponents were crushed not only by the use of the police and the army but also through his Fascist Green Shirt organization.

See COMMUNISM; SOCIALISM; ESTONIA and the articles on the various countries mentioned above, under *History*.

FEDERAL AVIATION COMMISSION.

See AERONAUTICS.

FEDERAL CAPITAL TERRITORY, AUSTRALIA. A territory of 940 sq. miles within the State of New South Wales, containing Canberra, the capital of Australia. The estimated population (Mar. 31, 1935) was 9407 compared with 8947 (1933 census). Canberra had 7500 inhabitants on Jan. 1, 1935.

Government. For 1933-34, revenue was £412,695; expenditure, £955,434. Control of the Territory was exercised by the Australian Minister of the Interior but certain services were taken care of by the Department of Health and the Attorney General's Department. See AUSTRALIA.

FEDERAL COORDINATOR OF TRANSPORTATION, REPORTS OF. See RAILWAYS.

FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA.

An organization established in 1908 by 28 Protestant denominations to act for them in matters of common interest. At the end of 1935 it included most of the major Protestant denominations of the United States, as follows: Northern Baptist Convention; National Baptist Convention; Free Baptists; Seventh-Day Baptists; General Council of the Congregational and Christian Churches; Disciples of Christ; Evangelical Church; Evangelical

and Reformed Church; Friends; Methodist Episcopal Church; Methodist Episcopal Church, South; African Methodist Episcopal Church; African Methodist Episcopal Zion Church; Colored Methodist Episcopal Church in America; Methodist Protestant Church; Moravian Church; Presbyterian Church in the United States of America; Protestant Episcopal Church; Reformed Church in America; Reformed Episcopal Church; United Brethren in Christ; United Presbyterian Church of North America; United Lutheran Church in America. Of these, all were full and official members with the exception of the United Lutheran Church, whose relationship was consultative, and the Protestant Episcopal Church, whose national council coöperates in certain specified areas of work. Since 1932 the United Church of Canada has been affiliated with the Council.

The total number of communicant members included in the Council's constituency, according to the *Yearbook of the Churches*, 1935, was 24,213,423. Coöperating with the Council were such agencies as the Home Missions Council, the Council of Women for Home Missions, the Council of Church Boards of Education, the American Bible Society, the Foreign Missions Conference of North America, and the International Council of Religious Education.

Of the Council's eight departments the following made a significant contribution during 1934. The department of social service accepted the responsibility, at the invitation of the U. S. Bureau of Prisons, of nominating and training chaplains for Federal penitentiaries; the department of evangelism launched a "National Preaching Mission"; and the department of international justice and goodwill concentrated on creating public support for American neutrality in the event of war. The radio department sponsored 12 religious programmes on the air each week; the department of research and education made a special study of the relation of church and state; and the department on race relations surveyed conditions confronting share-tenants and share-croppers in Alabama and Arkansas. The department of relations with churches abroad shared in the Universal Christian Council for Life and Work, held in Chamby, Switzerland in August, 1935. The *Federal Council Bulletin*, a monthly, continued to be issued as the official organ.

At the Council's biennial session, held in Dayton, Ohio, Dec. 4-7, 1934, the Rev. Ivan Lee Holt, pastor of St. John's Methodist Episcopal Church, South, St. Louis, Mo., was elected president. The Rev. George W. Richards, president of the Theological Seminary of the Reformed Church in the United States and of the newly formed Evangelical and Reformed Church, was elected vice-president. The general secretary is the Rev. Samuel McCrea Cavert. National offices are at 105 East Twenty-second Street, New York City. Regional offices are maintained in the Woodward Building, Washington, and at 203 North Wabash Avenue, Chicago.

FEDERAL EMERGENCY RELIEF ADMINISTRATION (FERA). See UNIVERSITIES AND COLLEGES; WELFARE WORK; UNITED STATES under *Administration*.

FEDERAL MUSIC PROJECT. See MUSIC.

FEDERAL TRADE COMMISSION. See UNITED STATES under *Administration*.

FEDERATED MALAY STATES. The four states, shown in the accompanying table, of the Malay Peninsula.

State	Sq. mi.	Pop. (1934)	Capital
Negri Sembilan	2,560	223,437	Seremban
Pahang	13,970	178,839	Pekan
Perak *	7,923	744,436	Taiping *
Selangor	3,160	503,012	Kuala Lumpur
Fed. Malay States ..	27,613	1,649,724	Kuala Lumpur

* Includes the Dindings (183 sq. mi.; 18,205 people) transferred to Perak by the Straits Settlements on Feb. 16, 1935. * The British Resident of Perak announced early in 1935 that the transfer of the capital to Ipoh had been approved, but the change must await the first suitable opportunity.

Chief towns: Kuala Lumpur (114,219 people), Ipoh (53,146), Taiping (30,132), Kampar (15,169), Seremban (21,563), Klang (21,621), Teluk Anson (14,768).

Production and Trade. The main products during 1934 (export figures in parentheses) were para rubber (256,516 tons), para latex (2,814,870 gall.), tin and tin ore (36,385 tons), copra (73,289 tons), firewood and timber (28,965 tons), canned pineapples (9475 tons), tapioca (2335 tons), palm oil (10,576 tons), palm kernels (2030 tons), gold (26,156 oz.). In 1934, imports were valued at \$84,731,059; exports, \$198,306,646 (\$\$ averaged \$0.5901 for 1934).

Government. For 1934, revenue totaled \$58,926,323; expenditure, \$47,211,228; public debt, \$96,185,714. The states were under the protection of Great Britain and were governed by a Federal Council in matters common to the four states. State councils legislate in individual state matters. The Federal Council consisted of the Governor of the Straits Settlements (who was ex officio High Commissioner) as President, 14 government officials, and 12 unofficial members nominated by the High Commissioner. There was a native ruler, assisted by a British resident, in each of the four states. High Commissioner in 1935, Sir T. S. W. Thomas. See BRITISH MALAYA.

FENCING. Pointing towards the Olympic games, fencing made great gains in dexterity and in number of competitors in 1935. The most significant development of the year was the return to the strips of Joseph C. Levis after a year's absence to reclaim the national foils championship which he had lost by default in 1934. The lone newcomer to the ranks of national champions was Lt. Thomas J. Sands, who triumphed with the épée. Sands and Norman C. Armitage, saber champion, represented the Fencers Club which annexed foils team, épée team and three-weapon team honors. The sabre team title went to the Salle D'Armes Vince and Dr. John R. Huffman captured the three-weapon crown.

In the college ranks New York University duellists won a major share of the laurels, taking team and individual foils and team three-weapon honors in the championships held in April. Hugo Costello, sophomore and son of the N.Y.U. coach, signaled his début in intercollegiate competition by winning the foils championship. Columbia University scored heavily with the sabre, taking the team crown and the individual laurels with Forrest Lombaer. Harvard turned back Navy to win the épée team and Kirkland B. Alexander of Princeton won individual honors with the épée.

Miss Helene Mayer, the girl who won the Olympic championship in 1932 for Germany, represented the Los Angeles A.C. and won the women's

national crown. Women's team laurels went to the Salle D'Armes Vince and Miss Frances Siegel topped a good field to win the junior title, the other women's individual championship.

FERTILIZERS. The total consumption of fertilizers in the United States during 1935 while still considerably below normal, showed an increase of approximately 10 per cent over the preceding year, thus completing two successive years of gradual increase. During the first six months of 1935 exports of fertilizers were 8 per cent under those of the corresponding period of 1934 in tonnage and 13 per cent in value, the most significant decreases being in nitrogenous chemicals. Imports in the January-June period exceeded those of the preceding year 11 per cent in tonnage and 8 per cent in value, the increase being due to larger imports of potash salts.

According to the National Fertilizer Association the fertilizer industry was regaining its lost tonnage in direct relation to the return of farm purchasing power. Fertilizer tax tag sales were larger in the 12 Southern States during June than during any similar period since 1931, and were 12 per cent larger than during the same month of the previous year. The National Fertilizer Association estimated that the capacity of the fertilizer industry in the United States to produce mixed fertilizers, superphosphate, and nitrogen far exceeded the present consumptive demand and that the infant potash industry was supplying about one-half of the national requirements.

Major members of the fertilizer industry devoted effort to the formulation of a plan of operation under a programme of voluntary self government following the period of operation under the Code of Fair Competition for the Fertilizer Industry which was invalidated along with all other NRA Codes by Supreme Court decision. Tentative plans include the organization of district associations to bring about compliance with or observance of fair trade practices.

The National Fertilizer Association and the U.S. Bureau of Chemistry and Soils were coöperating in a comprehensive study of the number of grades and the kinds and amounts of fertilizers consumed in each State during the previous fiscal year. Reports were already available from the fertilizer industry covering more than 78 per cent of the total tonnage of mixed fertilizers and fertilizer materials sold in the United States during the year, of which 74 per cent consisted of mixed fertilizers and 26 per cent of fertilizer materials. At least 1291 different grades were sold during the year.

Foreign developments of major importance continued to affect the American fertilizer industry. According to the U.S. Department of Commerce the trade pact between Spanish potash producers and producers in Germany, France, and Poland for regulating the world potash trade was confirmed, bringing the entire Spanish potash industry into alliance with European cartels. The purpose of the agreement is to regulate exports of potash by cartel members in order to reduce distribution costs and secure the best possible returns for all concerned. Its immediate effect was to terminate the severe price war which has been in effect for two years and which was responsible for a 40 to 50 per cent reduction in world potash prices. The Spanish production will be distributed by the export organization of the Franco-German syndicate. The cartel now includes all important European

producers of potash except the U.S.S.R. and Palestine.

The position of the Chilean nitrate industry was very much improved over that of previous years. Chilean nitrate interests and the European cartel of synthetic nitrogen producers signed a three-year nitrogen marketing agreement which is retroactive to July 1, 1935. In addition to Chile, signatories to the pact included representatives of Belgium, Czechoslovakia, Germany, Great Britain, Holland, Italy, Norway, Poland, and Switzerland.

According to the U.S. Department of Commerce the French government requested the nitrogen industry to reduce the sale price of nitrogenous fertilizers 10 per cent which would include a previous reduction of 4 per cent and make necessary an additional reduction of 6 per cent. A decrease of 5 per cent was brought about in the price of potash fertilizers and a series of reductions in the price of superphosphates resulted in a total reduction of from 9 to 12 per cent according to localities. The price of basic phosphatic slag was reduced 10 per cent as of August 16, 1935.

Chile and Peru took steps to conserve their guano supplies. The semi-official monopoly controlling the guano resources of Peru decided to export no more guano for several years in order to protect the interests of local agriculturists. In order to insure continuation of revenue to the government, formerly derived from exports, domestic prices were increased. In the face of a threatened shortage of guano, the Chilean government took steps to regulate the industry and protect guano-producing birds, and also canceled all concessions for private exploitation of the deposits. The industry was turned over to a state monopoly.

It was disclosed during recent discussions between representatives of the European Nitrogen Syndicate that Japanese production of ammonium sulphate for the fiscal year ending June 30, 1935, was short of consumption requirements by 100,000 to 150,000 metric tons. In return for the guaranteed delivery of needed imports at about \$25 per metric ton, Japanese manufacturers must refrain from exporting this material to the exclusive markets of the European syndicate and must limit exports during the next year to 50,000 metric tons. The *Oriental Economist* estimated that production of ammonium sulphate in Japan during 1935 was 900,000 metric tons and imports were 100,000 metric tons with no exports.

The world picture of the fertilizer industry showed general improvement in most quarters. According to the National Fertilizer Association the recovery programme in the United States directly benefited the industry. Early estimates indicated that American capacity to produce potash was much in excess of that of 1934 and that deposits already located are sufficient to provide all the potash likely to be needed for more than 200 years. Capacity was available to produce far more chemical nitrogen than the total combined consumption of industry and agriculture and imports were due almost entirely to preference of farmers for certain forms, particularly Chilean sodium nitrate. An average increase in production of ammonium sulphate in the United States occurred from January to August, inclusive, as compared with production during the same period of 1934, with the July and August increases being the largest.

American producers and importers of potash salts announced the organization of the American Potash Institute Incorporated for research and de-

velopment in the efficient and profitable use of potash in crop production. The U.S.S.R. potash output was increasing and was estimated to reach the 300,000 ton mark during 1935, thereby placing the U.S.S.R. in third place as a world potash producer. According to the U.S. Department of Commerce, current world production of potash fertilizer indicated that industry was rapidly recovering, with Germany continuing to be the outstanding world producer. French potash production also showed an upward trend accompanied by an increased volume of high grade salts.

Significant trends in the direction of greater efficiency in fertilizer use continued, including especially better knowledge of proper application; substitution of neutral and basic for acid-forming fertilizers; an increasing plant food content in fertilizers; a greater appreciation of the value of minor plant nutrients, a better understanding of the relative performance of different forms of nitrogen and a reduction in number of grades of fertilizers sold. Progress was also made in the development of essential relationships between the use of fertilizers and human health with special reference to the use of such elements as iodine, iron, copper, calcium, phosphorus, sodium, potassium, magnesium, sulphur, and manganese.

Increasing attention was being given by fertilizer manufacturers to the chemical changes in fertilizer mixtures containing dolomitic limestone and phosphate rock, the indications being that dolomite causes reversion of a portion of the available phosphoric acid in mixtures manufactured and stored under factory conditions, whereas the use of ground rock phosphate does not cause reversion but results in an appreciable gain in available phosphoric acid. A subcommittee on acid-neutral fertilizers of the American Society of Agronomy was appointed which outlined a research programme to determine the effect of different neutralizing agents on fertilizers and soil acidity. Studies by the U.S. Bureau of Chemistry and Soils on the effect of increasing the plant food content on the cost of plant food delivered to the farm showed that in New York and Pennsylvania, for example, a farmer could reduce his plant food cost 17 per cent merely by buying a higher grade fertilizer of the same plant food ratio, and in North Carolina a saving could be realized of from 8 to 20 per cent.

The development of new and cheaper methods of fertilizer manufacture continued and as a result of these improvements the mean wholesale price of all fertilizer materials, excluding organic ammoniates, is now only about half of what it was in 1900 according to the U.S. Bureau of Chemistry and Soils. The action of the Alabama Board of Agriculture in reducing the number of grades of fertilizer to be sold in the State to 13 was typical of this tendency throughout this country.

In Canada, provincial fertilizer councils, comprising manufacturers, farmers, and agricultural chemists, were organized to reduce the number of fertilizer analyses being produced. While previously there had been some 350 fertilizers registered under the Canadian fertilizer act the action of their councils resulted in a great reduction in the number of fertilizer analyses on the market without in any way lowering the efficiency of the mixtures for any desired purpose.

According to the *Chemical Trade Journal*, the value of magnesium in fertilizer mixtures attracted considerable attention in continental Europe. In France a fertilizer consisting essentially of mag-

nesium ammonium nitrate was introduced and acquired considerable popularity in wheat growing areas. In Germany the potash syndicate introduced a 40 per cent potash fertilizer salt with a guaranteed content of 5 per cent of potassium magnesium sulphate for use on light soils. Studies in Germany confirmed the essential character of magnesium to some crops and showed that magnesium sulphate is the most suitable form of this element. Apparently the essential properties of magnesium are related to chlorophyll formation. Similar results were obtained at the Connecticut and Maine Experiment Stations, the latter reporting that the use of dolomitic limestone is the best method of preventing magnesium deficiency in potatoes.

The research programme of the U.S. Bureau of Chemistry and Soils again was concentrated largely on the conversion of the country's natural resources of nitrogen, potassium, and phosphorus into improved fertilizer materials, the preparation of fertilizer mixtures which promote crop growth without increasing soil acidity, the production and study of the properties of new fertilizer compounds with special reference to their use in mixed fertilizers, and the need for minor plant food elements. Pioneer work was continued on the use of modern physical and physico-chemical research methods in the attack on numerous fertilizer problems of economic importance, the solution of which depends upon a knowledge of the physical constants and ultimate structure of the elementary substances and compounds involved.

Studies were continued of the factors which influence and determine the activities of catalysts in the various steps of processes for converting atmospheric nitrogen into nitrogenous fertilizer materials. This made possible the general employment in this country of the direct synthetic ammonia process with resultant low fixed nitrogen prices and self sufficiency for peace time industries and national defense. Although these developments together with increased consumption of organic ammoniates in animal feeds caused considerable displacement of the use of these ammoniates for fertilizers, demand for them still remained strong, despite their relatively high price, because of their resistance to leaching, action as conditioners in mixed fertilizers, slight tendency to increase soil acidity and slow rate of availability.

Efforts to produce cheap fertilizer materials that possess these desirable properties from organic materials of little or no value showed that those obtained by the ammoniation of peat gave most promise of serving as substitutes for the expensive organic ammoniates. Pot and nitrification tests indicated that under certain conditions of preparation and use the ammoniated peat is a suitable fertilizer material. Among several double salts of urea a combination of urea with magnesium sulphate was found to be of promising fertilizing utility. In that general connection urea was placed in production in commercial quantities by a large commercial plant in West Virginia.

Studies of the natural fixation of nitrogen in the soil by soil organisms continued at the State agricultural experiment stations and the U.S. Bureau of Chemistry and Soils. The bureau showed that *Azotobacter* is able to produce ammonia from a large number of nitrogenous compounds including proteins, amino acids, nucleic acids, and simple and substituted amides, and also from its own cell nitrogen, and that the ammonification takes place under aerobic and anaerobic conditions. Studies were started on cell oxidation as it occurs in

legume nodule bacteria. Preparations of the accessory substance essential to the respiration and growth of certain species of nodule organisms, considerably more concentrated than those obtained previously from sugar and molasses, were obtained by taking advantage of the fact that it is synthesized by Azotobacter. Studies dealing with leguminous plants emphasized the importance of carbohydrate supply in nodulation and nitrogen fixation.

Studies by the U.S. Bureau of Chemistry and Soils of processes for the production of potassium metaphosphate from potassium chloride and phosphoric acid, products of the blast furnace extraction process, showed that a two-stage procedure, the first conducted at 200° C with steam and the second at 540° C without steam, gives a product which when ammoniated can be used directly as a concentrated fertilizer. Recent developments in the cement industry made possible the large scale production of by-product potash as fume from cement kilns. This product may be variously treated to yield higher grade fertilizer materials. Continuing the study of the extraction of potash from silicates by hydrochloric acid, the U.S. Bureau of Chemistry and Soils designed an improved procedure wherein the dissolved salts obtained are precipitated with gaseous hydrochloric acid and are then selectively hydrolyzed for the separation of the potash and alumina as high grade products. Work on the solubility of alunite in various commercial solvents also was completed, indicating the possibility of using either potassium or sodium hydroxide to extract both the potash and alumina from previously roasted alunite.

The U.S. Bureau of Mines announced that mechanical methods of concentration were applied successfully to potash ores. Experiments with materials from the Carlsbad region of New Mexico containing 40 per cent potassium chloride and 60 per cent sodium chloride indicated the possibility of recovering over 96 per cent of the potassium chloride in the original material in a concentrate containing 95 per cent potassium chloride and only 5 per cent extraneous material. High grade concentrates were made with any one of three methods, involving tabling and flotation, tabling an agglomerated feed supplemented by flotation, and all flotation. Best results were secured if the ore was treated with crude oil prior to tabling. The drastic reduction in the prices of fertilizer potash salts occurring during the year altered the economic prospects of chemical processes for the extraction of potash from the potassium aluminum silicates.

Continuation by the U.S. Bureau of Chemistry and Soils of work on the process of preparing phosphate fertilizer by calcining silica bearing phosphate rock at 1400° C in the presence of water vapor showed that Tennessee brown rock phosphate is somewhat better adapted to the manufacture of calcined phosphate than are the other types of domestic phosphate rock, and that phosphate rock that has been concentrated by flotation methods can be used directly in the manufacture of calcined phosphate. Vegetative pot tests conducted in cooperation with the U.S. Bureau of Plant Industry and the Alabama, Arkansas, and West Virginia Agricultural Experiment Stations showed that properly prepared calcined phosphate is as good a source of phosphorus for plant growth as is either superphosphate or di-calcium phosphate.

These findings attracted wide interest in the fertilizer and phosphate rock industries. The

bureau also found that when by-product hydrochloric acid is used for the treatment of phosphate rock a hitherto unknown salt, calcium phosphate chloride, can be formed which is a suitable fertilizer material and may also be used for the preparation of di-calcium phosphate and calcium pyrophosphate. Additional information accumulated which is of primary importance in the preparation of superphosphates and complete fertilizer mixtures having good mechanical condition and satisfactory storing and drilling qualities.

A prominent commercial concern introduced a new nitrogen solution to the fertilizer industry for the ammoniation of superphosphate and triple superphosphate, the normal composition of which is ammonium nitrate, 60 per cent, ammonia 20 per cent, and water 20 per cent. An investigation was started to determine if superphosphate prepared with waste sulphuric acid from the refining of petroleum is harmful to plants and soil. A granular superphosphate containing 32 per cent available phosphoric acid for direct application purposes was put on the market which was found to be an improved form of this material by the Indiana Agricultural Experiment Station. A comprehensive report of the recently concluded experimental work of the U.S. Bureau of Chemistry and Soils on blast furnace smelting methods as applied to phosphate and potash rocks was in the course of preparation.

The U.S. Bureau of Chemistry and Soils and the State agricultural experiment stations continued to enlarge the knowledge of mixed fertilizer technology. A study of the effects of particle size on the drillability and efficiency of fertilizers was completed indicating that particles of superphosphate finer than 80 mesh are more efficient for growing cotton than are coarser particles, whereas large particles of soluble nitrogenous materials are better than fine powders. Nitrogen, potash, and total soluble salts were removed by natural agencies from the placement area in the soil in greater proportion as the size of the particles decreased.

Additional evidence was secured of the importance of reinforcing concentrated fertilizers with some of the less common elements such as manganese, zinc, nickel, copper, and iron for the efficient production of some crops. Zinc sulphate was found to control pecan rosette in Texas and mottle leaf of citrus in Florida and California, and Arizona citrus groves were aided in health and fruitfulness by the addition of a soluble iron salt to the plant or the soil.

Bibliography. Sources of information regarding progress in the production and use of fertilizers are numerous. Current progress is recorded in the *Fertilizer Review* published by the National Fertilizer Association at Washington, D. C., and in the *American Fertilizer* published in Philadelphia, Pa. Statistics of the fertilizer trade and industry will be found in reports of the U.S. Department of Commerce. Other recent publications of interest were: *The Use of Limestone in Mixed Fertilizers*, by J. W. Tidmore and C. F. Simmons (Alabama Station Circ. 67, Auburn, Alabama, 1934); *Fertilizer Usage in Ohio from 1920 to 1934*, by R. M. Salter (Ohio Station Bimonthly Bull. 173, Wooster, Ohio, 1935); *The Use of Fertilizers: A Guide to the Manuring of Crops in Great Britain*, by A. S. Barker (Oxford University Press, London, 1935); *Report on Phosphate Investigations During 1934* (Montana Station Bull. 296, Bozeman, Mont., 1935); *The Value of Gypsum as a Supplement to a Concentrated Fertilizer*, by

L. G. Willis (North Carolina Station Bull. 299, Raleigh, N. C. 1934); *A Review of the Patents and Literature on the Manufacture of Potassium Nitrate with Notes on Its Occurrence and Uses*, by C. W. Whittaker and F. O. Lundstrom (U.S. Dept. of Agri. Misc. Pub. 192, Washington, D. C., 1934); *Suitable Fertilizer Mixtures for Different Crops, Including the Functions of Chief Plant Nutrients*, by H. B. Mann and W. H. Rankin (North Carolina Station Agronomy Information Circ. 89, Raleigh, N. C., 1934); *Interpreting Fertilizer Analyses with Reference to the Sources of Nitrogen* (A. W. Blair, New Jersey Stations Circ. 331, New Brunswick, N. J., 1934); *Relation of Fertilizers to the Control of Cotton Root Rot in Texas* (U.S. Dept. of Agri. Tech. Bull. 426, Washington, D. C., 1935); *Experiments with Nitrogen Fertilizers on Cotton Soils* (U.S. Dept. of Agri. Tech. Bull. 452, Washington, D. C., 1935); *Fertilizer Studies with Sugar Beets in the Arkansas Valley Area, Colo., 1921-28* (U.S. Dept. of Agri. Circ. 319, Washington, D. C., 1935); *Concentration of Potash Ores of Carlsbad, New Mexico by Ore Dressing Methods*, by W. H. Coghill et al (Bureau of Mines Report of Investigation 3271, Washington, D. C., 1935).

FESTIVALS. See MUSIC.

FIJI, fē'jē, ISLANDS. A British colony in the South Pacific Ocean, comprising some 250 islands (80 inhabited) and the dependent islands of Rotuma, Viti Levu (4053 sq. m.) and Vanua Levu (2128 sq. m.) were the largest islands. Total area, 7083 sq. miles; total population (Jan. 1, 1935), 197,449. During 1934 there were 7196 births, 3054 deaths, and 1926 marriages. Chief towns: Suva (capital), on Viti Levu, 12,982 inhabitants in 1931; Levuka, on the island of Ovalau.

Production and Trade. Sugar, copra, molasses, trocas shell, butter, pineapples, and native food-stuffs were the main products. Sugar production for 1935 was estimated at 124,000 tons. In 1934, exclusive of transshipments, imports were valued at £995,204; exports, £1,456,455 of which sugar (103,863 tons) accounted for £1,069,049; copra (23,520 tons), £127,941; bananas (324,494 bunches), £67,845; gold (1033 oz.), £7590.

Government. For 1934, revenue amounted to £782,914; expenditure, £722,963; the total loan debt on Jan. 1, 1935, amounted to £1,273,901 (sterling) against which the sinking funds totaled £96,142 (Fiji). Government was vested in a governor aided by an executive council of 7 members, and a legislative council of 25 members. The Governor was also High Commissioner for the Western Pacific. Governor in 1935, Sir A. G. M. Fletcher.

FINANCE. See FINANCIAL REVIEW; PUBLIC FINANCE; UNITED STATES under *Administration*; and sections under *Finance* in countries.

FINANCIAL REVIEW. The year 1935 was by most financial observers reckoned a year of decided "recovery." Not only did the average level of securities of almost all classes advance markedly during the year, but the last three months of that period witnessed a revival of many of the favorite methods of speculation in issues which had been thought likely to suffer neglect for an indefinite period. The irregularity and "spotty" character of market advances which had been characteristic of the earlier years 1933-34 when sporadic increases had been invariably succeeded by corresponding declines, came to an end by the beginning of spring 1935, and, simultaneously with the decision of the Federal Supreme Court holding the National Recovery Administration Act un-

constitutional, was followed by a sustained upward movement of values which carried through until practically the end of the twelvemonth. Temporary declines and recessions were, of course, noted from time to time but they were only sporadic.

The general forward movement which occupied the months from March to December was consequently hailed as signaling a general return of "prosperity." While the volume of business in the stock and bond markets was not up to the heights of great excess in the 'twenties, the turnover in both branches was distinctly larger and the movement in the prices of shares brought the average of representative industrial issues up to above 140 during the last few days of the year; while bonds were a little below 100 (Dow, Jones averages). Taking the year as a whole, the average of stocks was 113.0 as against 106.7 for the year 1934. After long waiting the volume of business was now at length sufficient to provide a living income to the principal brokerage and bond houses, and in spite of all that had been said in criticism of the Federal Securities Act, the administration of the law was such as apparently to avoid any distinct or traceable restraining influence upon the total turnover, except for the increase in rates of charges which were entailed by it in the cost of doing business.

The reasons for the improvement were, of course, various, depending a good deal upon the bias and point of view of the person assigning them. Net earnings, although still suffering from tremendous burdens of taxation and threatened with more to come, were unquestionably better, while disbursements for dividends were unexpectedly large, due to the fact that the tax situation induced many concerns which would otherwise have carried portions of their earnings to surplus, to divide them among their stockholders in order to lighten the load of public charges resting upon the latter. Many persons were inclined to attribute the revival of stock market activity to the apparently hostile attitude which had been adopted by the Supreme Court of the United States with regard to the characteristic legislation of the so-called "New Deal." Others found it directly attributable to the movement of capital to the United States, now that Europe had become partially reassured with respect to the suspicion of intention to apply a policy of further devaluation. Still others were inclined to ascribe it to a natural revival of business taking place as a result of long deferred demand which could not indefinitely remain unsatisfied.

Whatever the explanation of it may have been, there was no doubt about the increase in the degree of activity. The turnover on the New York Stock Exchange—which at the beginning of the year was moderate (being usually less than one million shares a day)—had reached at the end of the season the extraordinary level of over two to three million shares daily, while bond trading had been similarly increased. In spite of the fact that Treasury operations were admittedly excessive and unsound the manipulation of the market on behalf of the government, carried on by various institutions to which the work had been assigned, resulted in holding up the values of government bonds and maintaining an abnormally high level of prices for the securities.

The transactions of the New York Stock Exchange for the year 1935 amounted to 381,666,000 shares or transfers of stock as against 323,871,000

for the preceding year and about 665,000,000 for 1933; while total bond sales were \$3,347,855,000 as against \$3,729,000,000 the year before and \$3,366,000,000 in 1933. There were many trading days of large activity, although none with the phenomenally high turnover which had been witnessed in some former years. During 1935 there were relatively few days with more than four million shares turnover each. This business moreover was quite thoroughly and evenly distributed and as a result the closing of branch houses by stock exchange firms was practically brought to a stop, while various new branches were opened during the year. The total number of main offices open at the close of the year was 639 with 1096 branches as against 1093 branches 12 months earlier. Despite the fact that foreigners had continued to remain out of the market as had been the case ever since 1932, the rising prices and renewed activity with prospects of corresponding gains drew many of them back into the market from and after September; so that by the close of the year the markets of Great Britain and continental Europe were again doing a comparatively satisfactory business in New York.

Trend of Security Prices. The trend of stock prices on the Exchange which had been described only in large terms may be compared with that of former years in the following table.

RANGE OF STOCK PRICES, BY YEARS

Year	High	Low	Range	Year	High	Low	Range
1924	95 0	72.1	22 9	1930	182.7	127 9	54 8
1925 ..	118 2	90 4	27 8	1931	143 8	89 2	54 6
1926 ..	122 2	103 5	18 7	1932	95 4	73.6	21 8
1927	147 7	118 2	29.5	1933	107.7	79 1	28 0
1928 ..	181 1	141.1	40.0	1934	106 7	93 3	13 4
1929 ..	208 9	154 6	54 3	1935	113 0	93 2	19 8

The situation as to bond prices was unusual. It has been customary among superficial market analysts to lay down the "law" that when stock prices rose, bonds declined and vice versa. During the years of depression bond prices had gradually recovered from the first shock of disaster and had gradually advanced to a very high level by the close of 1934. This high level was further raised during 1935 and, as stock prices took on some aspects of boom, the quotations of bonds failed to register any corresponding tendency to fall off. The conventional methods of investment were largely set at naught and those who had gone into bonds when they were at low levels, were able to reap corresponding profits or to remain in bonds with gratifyingly stable prices, according as they chose. The end of the year found them practically at high point. Foreign bonds suffered in particular issues on account of war conditions abroad, a fact which was conspicuously true of Italian issues. Others were subject to fairly serious fluctuations but also, invariably, as a result of home conditions and without any reference to the general situation of the money market.

Banking Conditions. During the year conditions were such as to provide abundant supplies of cheap money had they been called for, but the banks continued to find themselves disappointingly without applications for funds from brokers. The total of brokers' loans for December was only \$954,000,000 while the aggregate of other loans protected by collateral security at reporting member banks was only about \$2,111,000,000 at the end of December, as against \$2,260,000,000 a year earlier.

The Reconstruction Finance Corporation which in 1933-34 had widely recapitalized the banks, taking out preferred stock in some 6000 in all and

embarking close to one and a quarter billion dollars of the government's money in bank stock, continued to purchase stock and to make loans. Its president, Mr. Jesse Jones, about the middle of December took occasion to assure bankers that they need be in no hurry to repay the preferred stock or to settle their advances. During the year 1935 it also made a substantial amount of advances to business and public utility enterprises, and although the constant announcement was made as in former years that these loans were being repaid and that it probably would soon be able to retire from business with a profit, there was little in the figures to warrant any such expectation. The apparent abundance of cheap and easy credit which had been characteristic of 1934 was more than ever evident as 1935 drew to a close, and this was conspicuously true in land mortgage financing, although it remained a fact that savings banks exercised great caution with regard to the character of the security which they accepted in order that they might not run the risk of becoming "tied up" as the result of the various moratoria and restrictive acts of legislation which were adopted in the various States.

Stock Exchange and Legislation. The striking legislation of the year 1934 amendatory to that of 1933 and embodied in the so-called Securities Exchange Act of 1934, continued in operation but without amendment except so far as administrative changes tended to alter the application of it. The rounding out of the system of administrative control and oversight, however, was effected during the year by the issuance of numerous regulations, many of them amendatory to those earlier issued and resulting in subjecting almost every act of the brokerage or investment banking houses to Federal oversight and control. Branch offices with enormous staffs were established by the Securities Exchange Commission in various States and, while on the whole the financial community was of the opinion that the Securities Exchange Commission had been about as considerate of its interests as it could be under the existing circumstances, it nevertheless continued to regard the legislation in question as unavoidably a serious limitation upon its operations.

One of the outstanding events of the latter part of the year was the action of the Commission in bringing to trial a well-known Stock Exchange operator upon the charge that he had "manipulated" a given aircraft security. The evidence adduced by the attorneys for the Commission was not of a very convincing sort, but suggested to the financial community the thought that if practices of the kind described were to be regarded as tabu for the future, it would be very difficult for the brokerage community to engage in anything except the straight buying and selling of securities upon individual orders received from cash buyers and sellers or, in other words, that the character of Federal control suggested by the trial was being carried very much beyond anything that had previously been indicated. It seemed to them, in short, that the Federal government was proposing not merely an oversight of methods and types of issue and trading in securities, but also a constant scrutiny of individual transactions which might be attacked or tolerated according to the personal preferences of those who happened to be in charge at the time.

New Issues. For a good while it had been customary to say that while there might be extensive recovery or activity in consumption goods

industries, the real test of the restoration of business was to be found in the action of securities representing producers goods and in the restoration of the demand for new issues representing bona fide investments. During the year 1935 the volume of such new issues (bonds) was greatly restored, approaching the figure of \$1,438,000,000 new, and \$3,284,000,000 refunding loans. Profits on the whole were considerably less than previously, the operations of the Securities Commission having been effective in limiting the terms upon which issue houses were willing to bring out the new securities. Then, too, it was a fact, that a great many of the new issues were for refunding and therefore represented nothing more than the desire of enterprises to take advantage of the extremely low rates of interest prevailing in the market which had been established under the leadership of the Treasury as a working out of its endeavors to obtain low cost financing for itself.

When all allowances had been made however, the new security developments of the year showed a degree of elasticity and new vigor which was regarded by the community as decidedly encouraging. The extensive issues of the Treasury Department continued to be placed on the market at about the same rate as ever, and were proportionate to the great deficit of the Federal government. Borrowings of States and municipalities were also large, the practice of over-spending as compared with income being still very general. Foreign issues although extensively traded in were not placed upon the market de novo owing to the restrictions of the Johnson Act which continued in operation. No success was had in mitigating to any perceptible degree the foreign exchange restrictions imposed by the different countries of the world, so that as a result the movement of capital and the floating of securities on foreign behalf was as badly handicapped as ever.

The following table furnishes the essential data with respect to the operations of the year:

SUMMARY OF NEW FINANCING ^b (IN MILLIONS OF DOLLARS)

Year	Total domestic and foreign	Total domestic ^a	Domestic, new issues			Foreign, new issues	Refunding issues, domestic and foreign
			State and municipal	Bonds, notes	Corporate Stocks		
1923	4,417	4,016	1,043	1,976	659	421	682
1924	5,557	4,588	1,380	2,200	829	969	759
1925	6,201	5,125	1,352	2,452	1,153	1,076	925
1926	6,314	5,189	1,344	2,667	1,087	1,125	1,046
1927	7,556	6,219	1,475	3,183	1,474	1,337	2,220
1928	8,040	6,789	1,379	2,385	2,961	1,251	1,858
1929	10,091	9,420	1,418	2,078	5,924	671	1,422
1930	6,909	6,004	1,434	2,980	1,503	905	711
1931	3,089	2,860	1,235	1,240	311	229	949
1932	1,196	1,166	762	305	20	29 ^c	538
1933	720	710	484	40	120	12	344
1934	1,386	1,386	803	144	35	...	826
1935 ^a	1,438	1,438	884	344	69	...	3,284

^a Includes issues of Federal land banks and Federal intermediate credit banks, not shown separately. ^b Long-term; i.e. 1 year or more.

Sources.—For domestic issues: Commercial and Financial Chronicle; for foreign issues (issues publicly offered) annual totals are as finally reported by Department of Commerce. Also *New York Times Annual Financial Review*

New listing requirements of a stringent character enforced by the Securities Exchange Commission practically took the issues of various foreign governments off the list owing to the fact that these governments were not willing to file the information required by the Commission in question. Other regulations of the Commission including publicity for the dealings of corporate officers led various concerns to withdraw their securities from trading. As a whole, the situation still remained unsettled up to the end of the year in these particulars.

Movement of Gold. Reference has elsewhere

been made (see article on BANKS AND BANKING) to the important banking legislation of the year 1935 and to the efforts at manipulation of Reserve requirements which grew out of it. These pieces of legislation had a less direct effect upon actual market conditions than had been true during the preceding year but they nevertheless exerted an influence. More directly important perhaps was the continued disturbance of the monetary policies of foreign countries, which continued to be troublesome and which had the effect of leading to irregular and unaccountable movements of gold. In the same way the continued disturbances of tariff relationships and the international economic warfare represented by tariff changes and quota restrictions designed to neutralize the effect of monetary measures and devaluations upon international trade, furnished a difficult factor and one which could not be reckoned upon.

The inward movement of one and three quarter billion dollars of gold was accompanied by the maintenance of a small favorable merchandise balance of trade somewhat aggravated by the

CHANGES IN MONETARY GOLD STOCK ^a

[From Federal Reserve Bulletin. In millions of dollars]

	Gold stock, end of month	Increase in stock during month	Net gold import	Net re-lease from ear-mark	Domestic production, etc.
1935					
Jan.	8,391	153 3	149 4	1 1	2 8
Feb. ^a	8,527	135 3	122 8	0 2	12 3
Mar.	8,567	40 4	13 0	—0 7	28 1
Apr.	8,710	143 4	148 6	—2 3	—3 0
May	8,858	148 1	140 0	—1 5	9 6
June	9,116	257 1	230 4	1 0	25 8
July	9,144	27 9	16 2	—0 4	12 1
Aug.	9,203	59 5	46 0	1 8	12 2
Sept.	9,368	165 0	156 7	1 0	7 3
Oct.	9,693	325 2	318 3	—1 9	11 8
Nov.	9,920	226 6	210 6	0 6	15 5
Dec.	10,123	205 2	190 0	1 3	13 9
Total	10,123	1,887 2	1,739 0	0 2	148 0

^a Since Jan. 31, 1934—\$1 = 159 $\frac{1}{2}$ grains of gold $\frac{9}{10}$ fine; i.e. an ounce of fine gold = \$35.

European war conditions which, during the latter part of the year, tended to bring about larger than normal purchases of staple articles in the United States for shipment to Italy. Had it not been for the falling off in general trade which inevitably followed the restrictive measures of earlier years, the trade balance of the United States would have been still more seriously disturbed. Renewal of the difficulties of the "gold bloc" at mid-year and again toward the latter part of December, tended to aggravate the movement of gold and to place stabilization of international financial relationship further and further out of the question.

RANGE OF FOREIGN EXCHANGE QUOTATIONS IN DOLLAR TERMS BY WEEKS IN 1935

Week ended:	London (dollars)		Paris (cents)		Berlin (cents)		Norway (cents)		Sweden (cents)		Denmark (cents)		Belgium (cents)	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
January 5	4.94½	4.91¾	6.64½c	6.62c	40.43c	40.27c	24.84	24.73	25.48	25.38	22.08	21.97	23.53	23.53
February 2	4.87¾	4.85¼	6.57	6.49½	40.00	39.60	24.50	24.43	25.15	25.07	21.78	21.70	23.24	23.08
March 2	4.87	4.77½	6.67¼	6.62½	40.74	40.27	24.46	24.01	25.11	24.65	21.74	21.32	23.64	23.46
April 6	4.86¼	4.78½	6.61	6.58½	40.43	40.10	24.36	24.16	25.00	24.78	21.66	21.46	17.00	16.96
May 4	4.84½	4.83½	6.62½	6.59¾	40.44	40.30	24.33	24.27	24.97	24.90	21.63	21.57	17.00	16.93½
June 1	4.95½	4.91½	6.61¼	6.58	40.50	40.26	24.83	24.73	25.50	25.38	22.06	21.95	17.12	17.00
July 6	4.96	4.93½	6.64½	6.60½	40.49	40.31	24.92	24.88	25.57	25.47	22.14	22.05	16.93	16.90
August 3	4.96½	4.95½	6.63½	6.61½	40.45	40.30	24.93	24.91	25.58	25.56	22.15	22.14	16.95	16.91
September 7	4.96¼	4.93½	6.60½	6.59½	40.25	40.24	24.94	24.78	25.60	25.43	22.16	22.02	16.83	16.82
October 5	4.91½	4.88½	6.59¼	6.58½	40.27	40.18	24.68	24.56	25.33	25.21	21.94	21.82	16.90½	16.88½
November 2	4.92½	4.91½	6.59½	6.58¾	40.25	40.23	24.72	24.70	25.37	25.35	21.97	21.95	16.86	16.85
December 7	4.93½	4.92½	6.61¼	6.58½	40.28	40.22	24.80	24.76	25.45	25.42	22.03	22.00	16.92	16.85
Year's average	4.98½	4.72½	6.69½	6.45	40.80	39.39	25.05	23.84	25.70	24.47	22.27	21.18	17.12	16.81½

Week ended:	Holland (cents)		Switzerland (cents)		Italy (cents)		Spain (cents)		Austria (cents)		Czechoslovakia (cents)		Japan (cents)	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
January 5	68.06	67.89	32.65	32.54	8.59½	8.58	13.77	13.74	19.00	18.86	4.20½	4.19½	28.81	28.72
February 2	67.34	66.92	32.23	32.00	8.48	8.44	13.61	13.52	18.75	18.66	4.16¼	4.14¼	28.40	28.34
March 2	68.42	67.91	32.74	32.52	8.52½	8.48½	13.83	13.74½	19.05	18.95	4.22½	4.20	28.43	28.05
April 6	67.52	66.10	32.41	32.30	8.31	8.26	13.70½	13.66	18.88	18.83	4.19½	4.18	28.39	28.16
May 4	67.88	67.59	32.50	32.37	8.27	8.23½	13.73	13.66½	18.91	18.84	4.19½	4.17½	28.59	28.51
June 1	67.59	67.43	32.35	32.30	8.22½	8.21½	13.70	13.64½	18.83	18.80	4.18½	4.16	29.12	28.98
July 6	68.34	68.18	32.85	32.75	8.30	8.28	13.76½	13.73	19.02	18.97	4.20½	4.18½	29.17	29.08
August 3	68.02	67.72	32.79	32.69	8.21	8.19	13.75	13.70	19.02	18.95	4.16½	4.15¼	29.27	29.25
September 7	67.70	67.61	32.60	32.52	8.15	8.14	13.69½	13.66	18.93	18.89	4.14½	4.13½	29.31	29.01
October 5	67.72	67.57	32.58	32.54	8.15	8.09	13.66	13.63½	18.88	18.87	4.15	4.14	28.82	28.57
November 2	67.98	67.91	32.53	32.51	8.12	8.10	13.66	13.66	18.82	18.81	4.14½	4.14	28.75	28.74
December 7	67.92	67.78	32.47	32.35	8.10	8.10	13.69	13.65	18.81	18.79	4.15	4.13½	28.83	28.75
Year's average	68.70	66.10	32.94	31.92	8.59½	8.03	13.85½	13.50	19.15	18.66	4.23½	4.13½	29.47	27.91

Toward the end of the year, the United States was informed by its principal foreign war debtors that nothing could be expected from them for the current season; and the Secretary of the Treasury after a lengthy visit abroad, came home with the announcement that, in his opinion, international monetary stabilization was further off than had been the case several months before. In such circumstances, the gradual rise of the gold stock of the United States to more than \$10,000,000,000 naturally furnished a seriously alarming note in connection with the specie situation and the monetary structure of the world community as a whole.

International Balances. As already noted, the specie balance between the United States and other countries was seriously disturbed during the year 1935, but the inward movement of funds resulting from unbalanced merchandise trade was smaller than usual, whereas the net sum due to the United States had been \$478,000,000, it seemed during many months of 1935 as if our exports would hardly more than balance our imports and it was only after the development of a large war trade with Italy that this outlook was materially altered. In the final analysis the American favorable merchandise balance was raised to near \$100,000,000; but even this situation, developed under peculiar conditions to which reference has already been made, represented a noteworthy deterioration of the international trade balance as shown in the accompanying table.

MERCHANDISE EXPORTS AND IMPORTS (IN MILLIONS OF DOLLARS)

Month	Merchandise exports					Merchandise imports					Excess of exports				
	1931	1932	1933	1934	1935	1931	1932	1933	1934	1935	1931	1932	1933	1934	1935
Jan.	250	150	121	122	176	183	136	96	136	167	66	15	25	37	9
Feb.	224	154	102	163	163	175	131	84	133	152	49	23	18	30	11
Mar.	236	155	108	191	185	210	131	95	158	177	26	21	13	33	8
Apr.	215	135	105	179	164	186	127	88	147	171	29	9	17	33	— 6
May	204	132	114	160	165	180	112	107	155	171	24	20	7	6	— 5
June	187	114	120	171	170	173	110	122	136	157	14	4	— 2	34	13
July	181	107	144	162	173	174	79	143	127	178	6	27	1	34	— 4
Aug.	165	109	131	172	172	167	91	155	120	169	— 2	17	— 23	52	3
Sept.	180	132	160	192	198	170	98	147	112	162	10	34	13	60	37
Oct.	205	153	194	206	221	169	105	151	130	189	36	48	43	77	32
Nov.	194	139	184	195	269	149	104	129	151	169	41	34	56	44	100
Dec.	184	132	193	171	224	154	97	133	132	187	30	35	59	38	37
Year ...	2,424	1,611	1,675	2,133	2,282	2,091	1,323	1,449	1,655	2,018	334	288	225	478	234

Mention should be made of several reciprocity treaties which the Secretary of State succeeded in negotiating and for which he had obtained presidential approval. The latest and most considerable of the series was that with Canada, which became public at the end of November and immediately aroused severe criticism from protectionist industries, especially among the protectionist clique which had more and more come to be dominant in American agriculture. Hardly had the treaty been widely publicized when it was announced that demand would be made for a review of it by Congress, notwithstanding that the latter body had placed in the hands of the President the power to negotiate such agreements. The resignation of one of the leading officials of the "New Deal" in Washington, on account of his dissatisfaction with the Canadian treaty, illustrated the extreme to which the inner group of protectionists in the Democratic Party was disposed to carry their attitude. Particular criticism was visited upon the Canadian treaty because of the fact that it was said to run counter to the policy of the administration, as expressed in its efforts to advance agricultural development. As the treaty required ratification from the Parliament of Canada, it was still uncertain up to the end of the year whether it would or would not become an actual operat-

ing agreement between the two countries, so that it had no effect upon actual business so far as the year 1935 was concerned. The official comparison of the "balance sheet of the United States" for 1933 and 1934 is shown on page 241.

In reviewing the history of International Trade during the year 1935, the striking features affecting foreign exchange appear to be not unexpected movements of goods or capital, but the shipments of actual money—largely gold—from one country to another, due to the uncertainty surrounding the standard of value in various nations. This "panic-stricken movement of money from one capital to another" occasionally lowered and at other times drove upward the principal European currencies. Toward the end of the year the principal burden of the situation appeared to be borne by the so-called "gold bloc" countries and, particularly, by France.

An enormous flow of gold into the United States added to our stock of the metal about one and three quarters billions of dollars; while the strain growing out of the hysterical movement of funds caused a collapse of the postwar gold standard in Belgium. Serious depression in Switzerland and The Netherlands accompanied their currency difficulties, while the United States, already over-supplied with gold, probably received some inflationary impetus from the movement. In the table on page 239 are sketched the changing quotations for foreign exchange applicable during the past year.

FINE ARTS. See ART EXHIBITIONS; ART MUSEUMS; LITERATURE, ENGLISH AND AMERICAN; PAINTING; SCULPTURE.

FINGERPRINTING. See LAW.

FINLAND. A republic of Northern Europe. Capital, Helsinki (Helsingfors).

Area and Population. The land area of Finland is 134,547 square miles (water, 17,312 square miles) and the estimated population on Dec. 31, 1933, was 3,738,532 (3,667,067 at the 1930 census). Living births in 1933 numbered 65,047; deaths, 47,960; marriages, 24,472; emigrants, 677. Estimated populations of the chief cities on Dec. 31, 1933, were Helsinki (Helsingfors), 268,592; Turku (Åbo), 69,041; Tampere (Tammerfors), 58,220; Viipuri (Viborg), 71,817. Of the 1930 population, 3,022,257 spoke Finnish and 342,916 Swedish. Both languages are official (Swedish names are given above in parentheses).

Education. The illiteracy rate is less than 1 per cent. The population of school age in 1930 was 679,667. In 1932-33 there were 395,068 pupils in primary and 49,494 in secondary schools. The three universities (2 Finnish at Helsinki and 1 Swedish at Turku) had 7303 students in 1933-34.

Production. In 1930, 60 per cent of the population was engaged in agriculture and 16.8 per cent in industry. The area under crops in 1932 was

UNITED STATES BALANCE OF INTERNATIONAL PAYMENTS, 1933-34

[In millions of dollars]

Items	1933			1934		
	Receipts from foreigners for "ex-ports" (credits)	Payments to foreigners for "im-ports" (debits)	Net credits (+) or debits (-)	Receipts from foreigners for "ex-ports" (credits)	Payments to foreigners for "im-ports" (debits)	Net credits (+) or debits (-)
Trade and service items:						
Merchandise	1,675	1,450	+225	2,133	1,655	+ 478
Merchandise adjustments *	85	162	- 77	88	85	+ 3
Freight and shipping	49	65	- 16	61	96	- 35
Tourist expenditures	71	292	-221	94	314	- 220
Immigrant remittances	3	110	-107	5	105	- 100
Charitable, educational, and other contributions .....	....	25	- 25	....	24	- 24
Interest and dividends *	487 ^a	103 ^a	+384	453	126	+ 327
War-debt receipts	20	....	+ 20	1	....	+ 1
Government transactions (excluding war-debt receipts) ..	32	85	- 53	39	68	- 29
Miscellaneous services	105	20	+ 85	103	38	+ 65
Total trade and service items	2,527	2,312	+215	2,977	2,511	+ 466
Gold, silver, and currency:						
Gold exports and imports	367	193	+174	53	1,187	-1,134
Gold earmarking operations (net) .....	....	....	- 1 ^b	....	....	- 83
Gold movements (net) .....	....	....	+173	....	....	-1,217
Silver exports and imports ^c .....	....	....	....	17	103	- 86
Paper currency movements (net) ^d .....	....	....	- 90	....	....	- 48
Capital items: ^e						
Reported movement of short-term banking funds (net) ..	....	....	-412	....	....	+ 192
Reported miscellaneous short-term funds (net) ..	....	....	+ 27	....	....	- 8
Reported long-term capital movements ^f	1,505	1,456	+ 49	1,160	958	+ 202
Residual item (net) ^g .....	....	....	+ 38 ^h	....	....	+ 499 ⁱ

* This item consists roughly of three parts: (1) Exports and imports of goods for which data are available but not recorded in the official trade figures (e.g. ships, bunker fuel sold in the United States, silver, etc.).

^b In contrast with previous classification, items on bankers' commissions, fiscal agents' commissions, brokerage fees, etc., are no longer included in this item but appear in the item, *Miscellaneous Services*.

^c This is a revised figure which exceeds the original entry by \$45,000,000. The revised estimate, like the original, includes certain amounts which were funded during 1933.

^d This is a revised estimate based on the preliminary results of a special survey on foreign-owned investments in the United States.

^e Includes approximately \$59,000,000 held under earmark abroad at the end of 1933 for the account of a government agency.

^f Silver exports and imports were included in *Merchandise Adjustments* until 1934.

^g As indicated in the text of *The Balance of International Payments*, etc. (U.S. Govt. Printing Office), paper currency movements might be appropriately considered under short-term capital transactions.

^h Capital items are viewed as "exports" and "imports" of evidences of indebtedness.

ⁱ This item takes account of all reported security movements between the United States and foreign countries and includes international sales and purchases of long-term issues, new underwriting, sales and purchases of properties not represented by security issues, and security transfers resulting from redemption and sinking-fund operations.

^j This item has been referred to in certain previous bulletins, under such captions as "Discrepancy, due to errors and omissions" and "Unestimated items, errors, omissions, etc." In view of the negligible size of the item in 1933 and its unusually large size in 1934 both headings may be misleading. Owing to the "flight of capital" during part of 1933 it is inconceivable that no substantial errors or omissions entered into any of the estimates of that year and the small size of the residual balance must, therefore, be looked upon as largely fortuitous. On the other hand, the large balance in 1934 is clearly neither a "discrepancy" nor an accumulation of errors. It may be viewed, of course, as an aggregate of omissions in the sense that no attempt is made to identify the various component parts which presumably represent in large part the inflow of various classes of both American-owned and foreign-owned funds from abroad after the devaluation of the dollar, often in a manner that made a statistical record for balance-of-payments purposes impossible.

^k See footnote ^j.

^l See footnote ^j.

5,863,000 acres, or only 6.8 per cent of the land area. The value of the 1934 crops was 5,300,000,000 marks (4,607,000,000 marks in 1935). Crop yields in 1934 included: Wheat, 3,327,000 bu.; rye, 15,582,000 bu.; barley, 9,599,000 bu.; oats, 53,090,000 bu.; potatoes, 42,622,000 bu. Livestock in 1933 included 1,745,000 cattle, 973,000 sheep, 435,000 swine, and 357,000 horses. The 1933 butter production was 52,412,000 lb.; cheese, 15,126,000 lb. The value of industrial production totaled 10,837,000 marks in 1933 (9,556,000 in 1932). There were (1933) 3527 large industrial establishments, with a total of 140,736 workers. Paper, wood products, foundry products, and textiles were the chief manufactures. The number of sawmills in 1933 was 459.

Foreign Trade. General imports in 1934 were valued at 4,772,100,000 marks (3,926,000,000 in 1933) and exports at 6,217,000,000 marks (5,288,200,000 in 1933). The United Kingdom supplied 22.9 per cent of the 1934 imports by value (20.6 in 1933); Germany, 20.7 (27.5); United States, 8.6 (7.3). Of the 1934 exports, the United Kingdom

took 46.8 per cent (45.8 in 1933); Germany, 10.1 (9.8); and the United States, 6.9 (8.7). Leading exports were (in 1000 U. S. gold dollars): Wood pulp, 19,293; rough boards, 12,351; battens, 9970; newsprint, 5406; plywood veneers, 3842. Metals and manufactures, machinery, chemicals, coal and coke, and raw cotton were the leading imports by value.

Imports in 1935 totaled 5,344,100,000 marks; exports, 6,203,900,000 marks. U.S. statistics showed general imports from Finland in 1935 of \$12,157,788 (\$8,995,483 in 1934) and exports to Finland of \$6,107,794 (\$5,993,945 in 1934).

Finance. Closed budget accounts for 1934 showed total revenues of 4,136,000,000 marks (current revenues, 3,367,000,000 marks) and expenditures of 4,101,000,000 marks (current expenditures, 2,599,000,000). Budget estimates for 1935 balanced at 3,356,000,000 marks; and for 1936, estimates were: Receipts, 3,841,500,000 marks; expenditures, 3,838,200,000 marks.

The public debt on June 30, 1935, totaled 3,294,-

000,000 marks (foreign, 1,940,000,000; internal, 1,354,000,000). On June 30, 1934, it totaled 3,349,000,000 marks. The mark (par value as of Apr. 1, 1935, \$0.0426) exchanged at an average of \$0.0187 in 1933 and \$0.0223 in 1934.

Communications. On Jan. 1, 1934, there were 3464 miles of state-owned railway lines and about 160 miles of private lines. The government railways in 1933 carried 18,120,000 passengers and 10,491,000 metric tons of freight. Main highways extended 20,190 miles; other roads, 17,950 miles. There are 2500 miles of navigable waterways. The net register tons of overseas shipping entering the ports in 1934 was 5,379,000 (in 1933, 4,677,000). Air lines connect Helsinki with Turku, Tallinn (Reval), and Stockholm.

Government. Executive power is vested in a president elected for six years by 300 electors, chosen by direct suffrage in the same manner as members of the Diet. Legislative power rests with the unicameral Diet and the President. The 300 members of the Diet are elected by direct vote of all citizens over 24. The cabinet is appointed by the President but is responsible to the Diet. President in 1935, Pehr Evind Svinhufvud, elected Feb. 16, 1931. Premier, Toivo Mikael Kivimäki, heading a coalition cabinet appointed Dec. 14, 1932.

History. Economic conditions in Finland during 1935 continued the marked improvement recorded in the previous year. The average number of registered unemployed declined from 17,139 in 1933 to 10,011 in 1934 and 7163 in 1935. The index of industrial production (Base 1929 equals 100) rose from 95.8 in 1933 to 110 in 1934 and 117 for the first nine months of 1935. The national income from taxes, duties, and dividends increased to almost 3,500,000,000 marks in 1934 from 2,500,000,000 marks in 1932. Under these relatively prosperous conditions the government was able not only to continue its payments on the war debt to the United States (see REPARATIONS AND WAR DEBTS) but also to announce substantial tax reductions in the 1937 budget estimates. The lower limit of taxable income was raised from 6000 to 10,000 marks and property valued at under 100,000 marks was exempted as compared with the former limit of 40,000 marks. The tariff on rye, wheat, sugar and coffee was lowered and the military budget and allowances for dependent children were increased. The foreign debt was substantially reduced and the outstanding foreign and domestic loans were in process of conversion to substantially lower interest rates.

As agriculture was relatively less prosperous than industry, the government assisted the farmers by granting premiums on exported animal foodstuffs, by attempting to stabilize the wholesale price of butter at 24 marks per kilogram, and by supporting the prices of domestic animal fats. The sum of 135,000,000 marks was set aside in the 1935 budget for the payment of export premiums. A government commission was also appointed to study the extension of the compulsory old-age and health insurance system.

Favorable economic developments were reflected in the relative quiescence of domestic politics. The agitation among Finnish nationalists for restriction of the language privileges accorded the Swedish-speaking minority in the Constitution flared up again and aroused considerable ill feeling among the Swedes both in Finland and Sweden. A special session of the Diet was called on January 17 to consider a bill regulating the use of Swedish at Helsinki University. This government

measure, while strongly criticized in Sweden and the other Scandinavian countries, was attacked by the Finnish nationalists as too lenient. Finnish-speaking students struck for two weeks in protest against the measure. While Opposition forces in the Diet systematically obstructed action upon the bill, the nationalists conducted demonstrations outside and even went to the length of defacing Swedish signs.

The Diet finally adjourned without taking action on the bill. The nationalists then demanded a country-wide referendum on the language question, but this was rejected by Prime Minister Kivimäki. The Agrarians, who opposed the government on this issue, expelled from the party their two representatives on the Cabinet for supporting the government's language policy. In contrast with the Finnish agitation, the Swedish Riksdag in February passed a bill granting Finnish-speaking inhabitants of eastern Sweden the right to have Finnish-speaking teachers in the primary schools.

The language dispute threatened to affect the political orientation of Finland towards Sweden and the other Scandinavian States. Both Germany and Poland made overtures to Finland during 1935 in an apparent effort to secure her cooperation in the establishment of an anti-Soviet front. An emissary of Alfred Rosenberg, the Nazi publicist, was the leader of an active National Socialist movement in Finland and he established friendly relationships in official circles. In the middle of August the Polish Foreign Minister, Col. Josef Beck, paid a four-day visit to Helsinki. The indications were, however, that the majority of the Finns still remained attached to the Scandinavian bloc, with its emphasis upon peace and support of the League of Nations. The Finnish Foreign Minister attended the meeting in Oslo on August 29 of the Foreign Ministers of the three Scandinavian States, and early in December the Socialist Premiers of Denmark, Norway, and Sweden conferred in Helsinki with Finnish Socialists on the problems of the Baltic and Northern Europe. Military cooperation among Finland, Sweden, Estonia and Latvia in the event of war in the Baltic was reported to have been discussed at a meeting of representatives of the four powers in Helsinki in November. See ESTONIA and LATVIA under History.

The friendly sentiment evidenced towards Nazi Germany by conservative elements in Finland during the year was partly the result of the continuance of friction between Finland and the Soviet Union over the question of Finnish cultural rights in Soviet Karelia. Late in 1935 the Soviet authorities were reported to have repressed with severity the pro-Finnish agitation in that region. Edward Gylling, Finnish-born former Premier of the Karelian Republic, was said to have been killed by Soviet soldiers while being taken to a Soviet prison camp in the Arctic. The Russians were also reported to have created a safety zone along the frontier by replacing the Finnish-speaking inhabitants with Russians. The Finnish Government was sharply advised to mind its own business when it made an official request for information on these activities.

FIRE INSURANCE. See INSURANCE.

FIRE PROTECTION. The 1935 fire loss was the lowest since 1916. The factors responsible for the downward trend discussed in the 1934 and 1935 NEW INTERNATIONAL YEAR BOOK continued to affect the fire loss, but an upward trend in the monthly loss figures appeared toward the end of

the year. The trend toward curtailment of municipal fire protection was largely checked, and replacement of obsolete fire apparatus began after a period of years during which curtailment of appropriations had prevented proper maintenance.

Federal government emergency agencies, such as the Federal Housing Administration, and the Rural Electrification Administration, promoted fire protection through publicity on the fire aspects of their programmes. Improvement in public water supplies for fire protection was the object of many projects financed by Federal funds, and the erection of modern fire-resistive schools and other public buildings to replace old combustible structures had a desirable effect in reducing fire hazards. Extension of fire alarm systems and modernization of fire stations were also to some extent financed by Federal funds.

The removal of dilapidated buildings, referred to in fire protection circles as "conflagration breeders," proceeded at an accelerated rate, under the combined impetus of a desire on the part of building owners to avoid payment of taxes on buildings that were no longer profitable, and the efforts of municipal fire and building authorities to require the removal of unsafe structures.

The 1935 U.S. Fire Loss. The total fire loss for the year 1935 is estimated at \$259,159,945 by the National Board of Fire Underwriters. The loss by years since 1916 is shown by the following table:

1916	\$258,377,952	1926	\$561,980,751
1917	289,535,050	1927	472,933,969
1918	353,878,876	1928	464,607,102
1919	320,540,399	1929	459,445,778
1920	447,886,677	1930	501,980,624
1921	495,406,012	1931	451,643,866
1922	506,541,001	1932	406,885,959
1923	535,372,782	1933	271,453,189
1924	549,062,124	1934	262,848,122
1925	559,418,184	1935	259,159,945

The following table shows the monthly fire losses during the past three years:

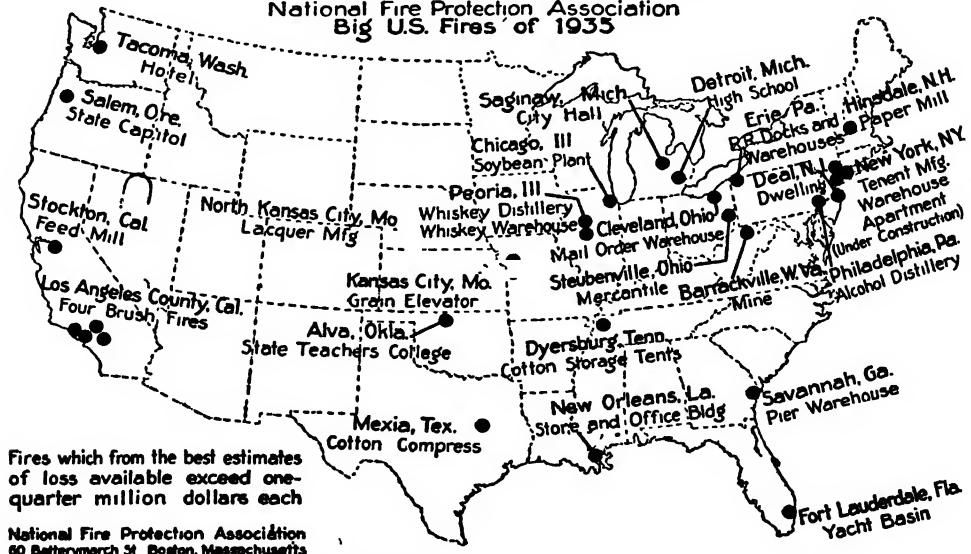
	1933	1934	1935
January	\$ 35,547,565	\$ 28,002,583	\$ 23,430,504
February	36,661,481	31,443,484	25,081,025
March	35,321,248	31,312,359	24,942,703
April	27,825,970	22,028,943	23,267,929
May	24,338,714	25,271,459	21,238,205
June	21,578,609	20,005,692	18,499,095
July	20,004,049	19,484,027	19,293,619
August	23,626,505	19,613,146	18,137,000
September	20,447,571	16,243,870	16,641,882
October	21,465,382	18,236,272	19,785,871
November	22,454,200	20,114,346	20,871,584
December	27,626,439	23,895,879	27,969,288
Total 12 months ..	\$316,897,733	\$275,652,060	\$259,159,945
Adjusted loss figures	\$271,453,189	\$262,848,122	
(Released later in year)			

During the year 1935 there were thirty fires involving a loss reported at \$250,000 or over, a decrease of four from the previous year. Four of these fires were forest and brush fires which occurred on the same day in various sections of Los Angeles County, Calif. The thirty fires occurred in various sections of the United States as shown on the accompanying map.

Of the large loss fires in 1935, the only ones which can be classed as group fires or conflagrations were the series of fires in Los Angeles County on October 23, which together destroyed a total of 222 buildings and caused losses of \$3,617,835, including damage to watershed property.

Fire Department Training. Interest in training schools for firemen reached a new high in 1935. Schools were held at over 350 centres and in nearly every State and province in the United States and Canada with a total attendance of more than 30,000 firemen. A decided trend was noted toward the holding of a larger number of zone and regional schools throughout a State instead of holding one or two State-wide schools. This was largely due to the determination of those interested to reach firemen in the smaller communities (especially the volunteer firemen) that heretofore received but little training in fire prevention and

ANNUAL CONFLAGRATION MAP of the National Fire Protection Association Big U.S. Fires of 1935



fire protection. Schools were sponsored by State and county firemen's and chiefs' associations, state fire marshal departments, insurance inspection departments, State universities, Federal and State departments of vocational education, State leagues of municipalities and other interested organizations.

In New York City Mayor LaGuardia picked 10 men interested in fire prevention to take a four-year course in engineering at the city's expense to qualify them for technical positions in the fire department. The many technical aspects of a fire department require especially trained men to administer them effectively. The modern fire department is becoming more of a scientific municipal agency and less of a purely fire fighting organization.

Technical Developments. A new method of fire extinguishment was developed utilizing a special form of high pressure water spray for extinguishing burning oil and other types of fires not ordinarily susceptible to control by water. Further progress was made in developing chemical treatments for wood and synthetic construction materials to reduce their fire hazard, with particular reference to the use of such materials in passenger vessels. The publication by the National Fire Protection Association of the 8th edition of the Crosby-Fiske-Forster Handbook of Fire Protection was received as a significant contribution to fire protection engineering.

Legislation. The States of Kansas, Kentucky, Nebraska, Vermont, West Virginia, and Wyoming in 1935 adopted the model arson law sponsored by the Fire Marshals Section of the National Fire Protection Association, making a total of 39 States having this desirable legislation. In States actively enforcing such laws the convictions for arson have increased and fire losses due to this crime have generally decreased.

The International Association of Fire Fighters sponsored a general campaign in 1935 for State legislation to place fire department personnel under civil service.

FISHES. See Zoölogy.

FISK UNIVERSITY. A coeducational institution for colored people in Nashville, Tennessee, founded in 1866. The total enrollment of 342 for the autumn of 1935 included 161 men and 181 women. The faculty numbered 48. The productive endowment for 1934-35 amounted to \$1,500,434, and the total income was \$260,075. The library contained approximately 48,000 volumes. President, Thomas Elsa Jones, Ph.D.

FITZMAURICE, EDMOND GEORGE FITZMAURICE, 1ST BARON, OF LEIGH. An English diplomat, died at Bradford-on-Avon, England, June 21, 1935. He was born in London, June 19, 1846, and educated at Eton, where he won the Prince Consort's Prize for modern languages, and at Trinity College, Cambridge, where he graduated first class in the classics and was awarded a prize for English essay. While an undergraduate he was president of the Cambridge Union Debating Society.

Fitzmaurice's first excursion in the political field was as a Liberal member of Parliament, to which he was elected in 1869 to represent Calne. He served until 1885, and in 1888 was elected to represent Cricklade, remaining in the House of Commons until 1905. He was called to the bar at Lincoln's Inn in 1871, and in the following year was appointed secretary to the Rt. Hon. Robert Lowe of the Home Office. In 1880, he was appointed a commissioner for the reorganization of

the European provinces of Turkey and Crete under the Treaty of Berlin, and it has been said that, had his plans for the reorganization been carried out, the World War might have been averted. He next served as Second Plenipotentiary at the Danube Conference of 1882-83. As a member of the Gladstone Ministry from 1882 to 1885, he served as Under Secretary of State for Foreign Affairs. From 1899 to 1905 he served as chairman of one of the standing committees of the House of Commons and in the schism of the Liberal Party over the South African War, he sided with Henry Campbell-Bannerman. Also, he was Under Secretary of State for Foreign Affairs again from 1905 to 1908, representing the Foreign Office in the House of Lords, having been created Baron Fitzmaurice in 1906. In 1907 he was first plenipotentiary at the London Conference on the African sleeping sickness. For the year 1908-09 he was Chancellor of the Duchy of Lancaster with a seat in the Cabinet.

Lord Fitzmaurice was known as a scholar as well as a diplomat, for the biographies he wrote revealed wide research and historical scholarship. He was the author of *Life of Lord Shelburne*, (1875-77); *Sir William Petty, the Political Economist* (1895); *Life of Granville Leveson Gower, Second Earl of Granville* (1905); *Charles William Ferdinand, Duke of Brunswick*. He also contributed to various periodicals and edited *Letters of the Abbé Morellet* and *Letters of Gavin Hamilton*, the art collector.

FIVE-YEAR PLAN, SECOND. See UNION OF SOVIET SOCIALIST REPUBLICS.

FLAGSTAD, KIRSTEN. See MUSIC under Artists.

FLAX. The 1935 flaxseed production of 13 countries reporting to the International Institute of Agriculture estimated at 36,642,000 bu. was 52.7 per cent above the production of 23,994,000 bu. in 1934 and 7 per cent above the average annual yield for the five years 1929-33. The acreage of these countries, 6,358,000 acres, was 30.1 per cent greater than the area in 1934. The yields of the leading producing countries exclusive of the United States were estimated as follows: India 16,720,000 bu., Lithuania 1,539,000 bu., Canada 1,433,000 bu., Latvia 928,000 bu., and Germany 634,000 bu. The Soviet Republics reported a yield of 27,558,000 bu. in 1934 and an average of 30,021,000 bu. for the five years 1929-33. Argentina, the leading flaxseed producing country of the world, reported a yield of 79,721,000 bu. in the crop year 1934-35 and an average annual yield of 68,404,000 bu. for the five years ending with the crop year 1933-34.

According to estimates by the U.S. Department of Agriculture the production of flaxseed during 1935 in the United States was 14,931,000 bu., nearly three times the short crop of 5,213,000 bu. in 1934 but 6.5 per cent less than the average of 15,961,000 bu. for the five years 1928-32. The area harvested in 1935, 2,071,000 acres, was more than twice the 969,000 acres harvested in 1934 when drought and high temperatures caused the abandonment of a large acreage. Most of the increase in acreage in 1935 occurred in the Dakotas and Minnesota. The average yield per acre was 7.2 bu. compared with 5.4 bu. in 1934 and 6.9 bu., the average for the 10 years 1923-32. Among the 11 States reporting flaxseed production Minnesota ranked first with 6,450,000 bu., North Dakota second with 6,030,000 bu., South Dakota third with 912,000 bu., and California fourth with 570,000 bu.

The 1935 flax fibre production of ten countries

reporting to the International Institute of Agriculture was estimated at 290,070,000 lb., an increase of 49.4 per cent over the 1934 production and an increase of 63.8 per cent over the average for the five years 1929-33. The leading fibre producing countries and their yields were reported as follows: Lithuania 79,184,000 lb., Belgium 61,730,000 lb., Latvia 58,662,000 lb., and Germany 27,556,000 lb., Northern Ireland in 1934 reported a yield of 8,236,000 lb.

During the fiscal year ended June 30, 1935, the United States exported 159,000 long tons of linseed oil cake, 11,000 long tons of linseed oil-cake meal, and 795,000 lb. of linseed oil and imported 14,463,000 lb. of linseed oil cake and oil-cake meal, 1,722,000 lb. of linseed oil, 9,104,000 bu. of flaxseed, and 2 long tons of unmanufactured flax fibre.

FLEMISH AUTONOMY MOVEMENT.

See BELGIUM under *History*.

FLOOD CONTROL. The most important flood protection works now under way are the Mississippi River work, which has been a continuous problem for many years, the Muskingum Flood Control in Ohio and the San Gabriel Work in California.

A revised plan for the Mississippi flood control was submitted to the Committee on Flood Control of the House of Representatives by General Markham, Chief of Engineers (see *Eng. News-Record*, April 4). This plan eliminated most of the objections which had been raised to the original, so-called Jadwin plan of 1928. The estimated cost of this new plan, including the completion of constructions retained from the Jadwin plan, was put at 313 million dollars.

It will be recalled (see 1928 YEAR BOOK) that the principal criticisms of the Jadwin plan were due to the fact that it was planned to leave large areas of the valley subject to occasional overflow during exceptional floods—the relief floodways. The new plans reduce greatly these areas by means of proposed new flood levees and the estimate also includes compensation for owners of lands subjected to overflow. This latter item was a stumbling block in the original estimates (see 1929 YEAR BOOK).

The Muskingum Flood Control project in Ohio, a work involving some 13 earth dams, went forward during the year and is now approximately one-third completed.

The San Gabriel Flood Control has been noted in previous YEAR BOOKS, particularly the difficulties in finding suitable dam sites. This project is actually a combination of flood relief and water conservation. The plan is to reduce flood conditions through storage and to release stored water gradually so as to replenish ground water in an extensive irrigated area in which water for irrigation is secured through pumping from wells.

FLOODS. In general, the floods which occur when natural streams of inland regions overflow their banks may be grouped into two classes. One type is the local flood over the land bordering a small stream, which is confined to a relatively small region; if the small region is not densely populated little damage is done, but if it is thickly settled great damage may be caused by a local flood. The other type is the flood over land bordering a large stream. Both classes of floods are caused by heavy rains (occasionally supplemented by melting snow). While there is no sharp line of demarcation between the two types of floods, it may be said that: (1) the average intensity of the rainfall over the drainage area which causes

a local flood must be considerably greater than that causing a flood in a large stream, before much outside public interest is attracted to the local flood; (2) local floods are of short duration while floods in large streams may last weeks or months; (3) at the present state of the meteorological and hydrological sciences it is impossible to predict the occurrence of local floods, while floods in large streams can usually be accurately predicted and most governments maintain services for this purpose. The seacoasts sometimes experience a flood of a third class; such floods are not due to rains but result from the so-called tidal waves caused by earthquakes or terrific windstorms.

The year 1935 was unusual as regards floods in the United States. In the first place, although there were numerous floods in the large streams, few were of more than passing interest, the most important one being the flood in the lower Missouri Basin during May and June. Secondly, there was an unusual number of severe local floods. These local floods caused so much damage that the total loss to life as well as to property exceeds that of any year since 1927 when the great flood took place in the Mississippi River.

The small streams near Memphis, Tenn., reached unusually high stages in January and considerable damage was caused to property there. The high water in Wolf River broke several steamboats away from their moorings in Memphis.

During March there were severe floods in the White and St. Francis River systems of Arkansas and southern Missouri. At many places on the tributary streams of these rivers the flood waters reached higher stages than previously recorded. Many breaks occurred in the levees there. Farmers fled, abandoning household goods and livestock. Four companies of the Missouri National Guard were called out and sent to the flooded area to preserve order and assist the flood-stricken people. The Red Cross aided 25,000 flood refugees. Four persons were drowned.

There was an important flood in the Green River in Kentucky which began in March and ended in April. From a monetary standpoint this flood was the most disastrous one of record in the lower Green River Valley. The flood waters did not reach stages quite so high as during the great flood of 1913 there, but due to the development of property interests through the intervening years the losses were much greater in the 1935 flood than in the greater inundation of 1913. At Rumsey, the Green River is about 500 feet wide at an ordinary stage, but on April 13, the day of the 1935 crest, it was 14 miles wide. McLean County was most seriously affected; about 40 per cent of this county was inundated. For a while there was much apprehension lest disease break out in the flood-stricken section, but prompt measures taken by governmental agencies quickly allayed this fear.

In April heavy rains and melting snows caused floods in the Sacramento River System in California. Water from the river backed up into the first floor of the State Capitol, as well as many other buildings. Five persons were drowned.

Portions of the Tallahatchie and Yazoo valleys in Mississippi were under water from January to May. Thirteen persons were drowned by these floods. There was a high flood in the Red River during May. Beginning in March and ending in May a flood crest passed down the Lower Mississippi River. Almost immediately it was followed by another crest which ended early in July. These lower Mississippi floods caused damage, but much

less than that caused by the last previous flood (1933) there.

There were exceptionally heavy rains on May 30 and 31, over Northeastern Colorado and adjoining portions of Nebraska and Kansas. These rains caused unprecedented floods in the Republican River as well as in the streams of the upper South Platte Basin. Ordinary creeks and arroyos soon became raging torrents and the highest water in the memory of the white man occurred at all places in this region. These floods caused the loss of 19 lives in Colorado, 104 in Nebraska (all along the Republican River), and six in Kansas. Among all the streams in this region, the Republican River caused the most destruction. Although the rains were heaviest in the upper reaches, the flood extended throughout the length of this river in Nebraska and Kansas. About 250,000 acres of land in Nebraska were flooded, being a strip along the river throughout its length in the State (210 miles), and from 1 to 3 miles wide. Besides those drowned, more than 1000 families were made homeless and the buildings on more than 600 farms were washed away. Two hundred and thirteen miles of railway tracks were washed away. This flood, was, by far, the worst in Nebraska since the coming of the white man. In addition to the area flooded in Nebraska, about 80,000 acres were inundated in Kansas by the Republican River.

At the time of the flood in the Republican River there were floods in all of the remaining rivers of the Kansas System, but none approached the disastrous proportions of the Republican.

Heavy rains in Missouri during May caused floods in the Grand, Osage and lower Missouri Rivers. The Missouri River below Herman, Mo., remained above flood stage an unusually long time, the duration of this flood exceeding that of any previous one, and excepting the high water of 1903, reached the highest stage since 1844. A noteworthy feature of the floods in the Missouri Basin was the fact that no appreciable damage resulted in Kansas City. The Kansas River enters the Missouri here and although the Kansas, Osage, and Grand Rivers were very high the Missouri above Kansas City was not in flood.

Heavy to excessive rains over the watersheds of the Colorado, Guadalupe, and Nueces Rivers (all in Texas) from June 12 to 16 caused unprecedented floods in these river systems. The highest stages known occurred at Marble Falls, Austin, and Smithville on the Colorado; and at New Braunfels and Victoria on the Guadalupe; and at Cotulla on the Nueces. Thousands of pecan trees were uprooted when the flood waters inundated groves bordering the rivers and many farm buildings were washed away. Damages were also heavy to bridges and highways, and eight persons were drowned.

During July there were disastrous local floods in New York State and northeastern Pennsylvania. Over that part of New York extending from northern Steuben County eastward to northern Delaware County new records for precipitation were established by heavy rains, and the accompanying floods caused record breaking stages in practically all of the small streams there. The heaviest rainfall fell over an area extending from Keuka Lake to the middle of Chenango County and covering the divide between the Finger Lakes drainage to the north and the Susquehanna and Delaware drainage to the south. The intensity of the rainfall decreased rapidly with increasing distance from this area. In this part of New York

and Pennsylvania the topography is rough; many small streams flow into glacial valleys and the slope of the streams is steep. The heavy rainfall brought many of these streams to high flood peaks so suddenly that people were caught practically unaware and trapped in houses, automobiles, and cottages along lake shores. During the early hours of July 8, creeks whose summer flow is usually negligible were many feet deep and flooded the cities, towns, and villages. Trees, buildings, and other debris jammed bridges and culverts, thus diverting the streams or damming them temporarily. Railroads and highways were washed out, bridges and buildings were carried away and fields were deeply gullied and stripped of top soil or buried under gravel. There were 52 persons drowned.

A sudden flood during the night of July 11-12 in the Granada Creek Valley of Colorado drowned eight persons while asleep in their home. Much damage was also done to property.

Near Dragoon, Ariz., on August 28, a transcontinental bus was parked on high ground awaiting the abatement of flood water from nearby mountains, when a wall of water suddenly came, lifted the heavy bus with its 29 passengers and crew and washed it away. Fortunately 24 of the people escaped with their lives, though three of these were injured.

There were unusually heavy rains in the Muskingum River Valley during August. The resulting floods came at about the height of harvest and damage was severe.

There were three floods of note during September; all were local floods. One was in the lower James River in Virginia; this river was very high (the stage at Richmond was higher than since 1877) but little damage was reported. The second was the one in the Rio Grande from Elephant Butte, N. Mex., to El Paso, Tex. The third was in southern Delaware and eastern Maryland. All the small streams here reached exceptionally high stages; damage was extensive and in Federalburg, Md., many people were made homeless.

A flood took place in Buffalo Bayou on Dec. 9, 1935. This stream flows through Houston, Texas, and as the flood reached a height 7 feet higher than the 1929 flood (the maximum previously recorded there) much damage was done.

FLOOD LOSSES IN THE UNITED STATES IN 1935

<i>Drainage</i> ^a	<i>Reported losses</i> ^b	<i>Lives</i>
Great Lakes	\$ 13,185,000	..
Atlantic Slope	16,391,383	52
Gulf (except Mississippi)	28,745,747	22
Mississippi (except Ohio)	59,783,835	177
Ohio	8,534,626	5
Pacific Slope	557,150	5
Total	\$127,197,741	261

^a There were no losses reported in other Drainage Areas.
^b Probably about 75 per cent of actual.

FLORIDA. Population. On Apr. 1, 1930 (Fifteenth Census), 1,468,211; July 1, 1934, by latest Federal estimate, 1,575,000; 1920 (Census), 968,470. Jacksonville had (1930) 129,549 inhabitants; Miami, 110,637; Tampa, 101,161; Tallahassee, the capital, 10,700.

Mineral Production. The production of phosphate rock, the main mineral activity in the State, increased in quantity to 2,369,334 long tons for 1934, from 2,136,123 for 1933; in value, to \$8,076,317 (1934), from \$6,417,110 (1933). The greater rise in total value resulted from an increase of the year's average value per ton, by 41 cents, to \$3.41.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Oranges	1935 .....	.....	16,000,000*	\$28,000,000
	1934 .....	.....	17,600,000*	26,887,000
Grapefruit	1935 .....	.....	10,500,000*	12,075,000
	1934 .....	.....	15,200,000*	11,801,000
Corn	1935	671,000	6,374,000	4,143,000
	1934	639,000	6,390,000	5,048,000
Peanuts	1935	256,000	163,840,000 ^b	4,588,000
	1934	245,000	142,100,000 ^b	4,121,000
Potatoes	1935	26,000	2,288,000	3,089,000
	1934	25,000	3,250,000	3,705,000
Cotton	1935	86,000	29,000 ^c	1,491,000
	1934	91,000	28,000 ^c	1,705,000
Sweet potatoes ..	1935	22,000	1,870,000	1,683,000
	1934	20,000	1,800,000	1,710,000
Tobacco	1935	9,800	8,680,000	2,398,000
	1934	6,700	5,216,000	1,583,000

* Boxes, ^b Pounds, ^c Bales.

Education. An act of the Legislative session of 1935, whereby the State would guarantee help to counties to maintain eight months a year of public-school instruction, was found unconstitutional by the State Supreme Court in November. In spite of this, the Governor declared that State aid would be given.

Charities and Corrections. A Board of Commissioners of State Institutions, under the system in force during 1935, was the central agency of supervision for the State's institutions having care and custody of persons. These institutions were the following six: Florida State Hospital for the Insane, at Chattahoochee (population at the end of 1935 about 4000); Florida Industrial School for Boys, at Marianna (about 500); Florida Industrial School for Girls, Ocala (about 90); Florida State Penitentiary, Raiford (about 1500, not to count virtually as many more convicts distributed in road camps to perform work on highways); Florida Farm Colony for the Feeble-Minded and Epileptics, Gainesville (about 500); and Florida State Farm No. 2, at Belle Glade (about 150).

Legislation. Among the acts of the regular biennial legislative session convened in April was the creation of a State planning board somewhat on the model of the National Planning Board of the Federal Government; the act authorized the several counties to create planning boards of their own as well. A measure declaring a moratorium for two years on public debts was passed, but Governor Scholtz vetoed it, declaring that "this is no time for Florida to be put in the position of suspending payments." Taxes on business were imposed by requiring occupational licenses that called for payment of fees and by creating a levy on gross receipts. Both these imposts were graduated in accordance with the number of shops under one ownership: the single shop must pay \$10 a year for a license and 1 per cent of its receipts of the year previous; the shop in a chain of 16 or more, \$400 for a license and 5 per cent of gross receipts. Measures were passed to facilitate the Federal creation of the Everglades National Park. A quick-divorce act was passed, reducing the required term of residence of applicants for divorce to 90 days, from one year.

Political and Other Events. The constitutional change of 1934 exempting homesteads below the valuation of \$5000 from the tax on property bred conflict. The State Comptroller advised county commissioners that such homesteads must not be put on the tax rolls, but the Hillsborough County Attorney held on the contrary that they must. Suits were entered in Federal courts against the

exemption of homesteads from taxation when they had been liable for public indebtedness before the change of 1934 had been effected.

A Federal undertaking to dig a canal for ships across Florida (the Gulf-Atlantic Ship Canal) from Jacksonville to Port Inglis, via Palatka, at a cost of some \$146,000,000 was begun in September. Jacksonville and the other places along the route strongly approved the scheme, but sentiment in some other areas opposed it. The argument was advanced that cutting to tide level would be likely to sever underground passages in the limestone deposits supposed to carry to the central part of the State the water nourishing the great flowing springs of the area. Placards were displayed, reading: "What shall we do without water?" A Water Conservation Committee busied itself to check the project.

The State's act of 1933 permitting the State and its subdivisions to receive at par value the bonds of the State, counties and statutory districts in payment from acquirers of real estate forfeited for non-payment of taxes was declared unconstitutional by the Federal Circuit Court at New Orleans. A special form of government by commission was established for Key West and its environs, forming Monroe County. The voters were to elect one of three commissioners, the State to appoint another, and the Federal Government the third.

Economic conditions in the State were mixed. The State Hotel Commission reported on April 4 that the State's resorts had passed the most profitable winter since that of 1925-26; that 1,750,000 visitors had spent an estimated \$625,000,000 in the State. Banks in Miami reported deposits 25 per cent higher in the aggregate than a year earlier. On the other hand 1500 needy people marched to the city hall of Miami on July 31 to influence the city commission to vote more funds for their support.

A hurricane devastated a stretch of the Florida Keys on September 3, taking several hundreds of lives. The victims for the most part were occupants of special camps for war veterans, which had been established by the FERA (q.v., under UNITED STATES; *Administration*).

Officers. The chief officers of the State, serving in 1935, were: Governor, David Sholtz; Secretary of State, R. A. Gray; Attorney-General, Cary D. Landis; Comptroller, J. M. Lee; Treasurer, W. V. Knott; Superintendent of Public Instruction, W. S. Cawthon; Commissioner of Agriculture, Nathan Mayo.

Judiciary. Supreme Court: Chief Justice, J. B. Whitfield; Associate Justices, Rivers Buford, W. H. Ellis, Armstead Brown, Glenn Terrell, Fred H. Davis.

FLORIDA, UNIVERSITY OF. A State institution of higher education for men, in Gainesville, Fla., established in 1853. In the fall of 1935 the registration totaled 2868; in the summer session of 1935, it was 1602. The faculty numbered 165. The endowment was \$261,796 and the instructional and operating cost was \$665,054. The library contained 118,580 volumes. The P. K. Yonge Laboratory School, opened in 1934, had an enrollment of 472 students. A photographic laboratory was completed and the new Student Union Building was almost ready. The General College, a two-year general curriculum for all entering students, was opened in the fall of 1935 with 853 students. President, John James Tigert, LL.D.

FLORIDA CANAL. See CANALS.
FLORIDA STATE COLLEGE FOR WOMEN. An institution for the higher education

of women in Tallahassee, Fla., founded in 1905. The enrollment for the autumn of 1935 was 1676. The summer session had an attendance of 872. The faculty numbered 138 members. The income from State appropriations was \$383,172, and from all other sources, \$73,565. There were 57,309 volumes in the library. An education and psychology building was completed in July, 1935. President, Edward Conradi, Ph.D.

FLOTATION. See METALLURGY.

FOOTBALL. Three teams, undefeated, dominated the 1935 football season. They were Princeton University in the East, the University of Minnesota in the mid-West, and Southern Methodist University in the Southwest and their achievements were of such high caliber as to leave experts groping for suitable adjectives and for some method of determining the best of the three. Princeton signified that it would decline a bid to play Stanford, Pacific Coast champion, in the Rose Bowl Jan. 1, 1936, and the University of Minnesota was prevented from participation in any post-season endeavors by the rules of the Western Conference. S.M.U. was chosen after its defeat of Texas Christian U. for its eleventh consecutive triumph of the year.

The teams mentioned were great, but there were a dozen others in the same classification or near it. There was Louisiana State, which lost only to Rice early in the season; Ohio State, beaten by Notre Dame in the final seconds; California, beaten only by Stanford; Holy Cross, unaccountably tied by Manhattan; Army, beaten only by Pittsburgh and tied by Notre Dame; North Carolina, beaten only by Duke. The country probably never had more great football teams in a single year and the college athletic directors and managers experienced a season of financial worth. The sold-out arena was restored to the autumn picture. The Ohio State-Notre Dame, Army-Notre Dame, Army-Navy and Fordham-New York University games being among those sold-out weeks ahead of time. The Southern Methodist-Texas Christian game in Texas was another with national attention turned to it as was the North Carolina-Duke game which attracted the South's greatest football crowd in history.

The season produced its share of upsets. Alabama and Stanford which had met in the Rose Bowl, January 1, with Alabama the winner, met with rebuffs at the outset of the new campaign. Alabama falling before Mississippi State and being tied by Howard, and Stanford losing to U.C.L.A.

For the third year in a row Minnesota, in spite of heavy losses through graduation from the championship squad of 1934, went through the season unbeaten. The Gophers tied for Big Ten honors, tied by Ohio State, beaten only by Notre Dame in a hair-raising game at Columbus, in which Notre Dame scored three touchdowns in the final quarter to wipe out an early and impressive lead. Princeton's fine team included Navy, Cornell, Harvard, Yale, and Dartmouth among its victims, defeating Dartmouth in the final game in a superb exhibition in a blinding snowstorm. Duke won Southern Conference honors and Nebraska gained the Big Six laurels.

Professional football, particularly as presented by the National Football League, continued to gain such popularity that at the close of the year plans were made for the formation of a new major league in 1936, called the American Foot-

ball League. The Detroit Lions, leaders in the Western Division of the league, won the championship, downing the New York Giants, 1934 winners, in the playoff game at Detroit in December, 26 to 7.

FORDHAM UNIVERSITY. A Roman Catholic institution for higher education, under the Society of Jesus in New York City, founded as St. John's College in 1841. It is the largest Roman Catholic educational institution in the United States. The enrollment for 1935-36 totaled 7415 students, including 1413 in the teachers' college and 722 in the graduate school, and a distribution among the other colleges as follows: Law, 896; Fordham College (Bronx Division), 1586; Fordham College (Manhattan Division), 515; school of business, 246; pharmacy, 150; social service, 462; preparatory school, 402. The registration for the summer session of 1935 was 1063. There were 382 faculty members. The endowment fund amounted to \$504,100. There were 130,000 volumes in the library. President, Very Rev. Aloysius J. Hogan, S.J., Ph.D.

FORESTRY. A rational plan for the conservation of natural resources of the country, long the desire of forward looking citizens, came nearer to being a reality in 1935 than ever before. "Never before," says F. A. Silcox in his annual report as chief of the U.S. Forest Service, "have the people of a great country still rich in the foundations of prosperity sought to forestall future disaster by applying a national policy of conservation of which planned land use is the central core." He adds "but to wait always until the forest has been so wrecked that only the public purse can possibly meet the expense of reclaiming it or to limit public lands to lands too poor to make timber production cover its cost would mean to lose sight of the true objective of public forest policy." With an average of 100,000 Civilian Conservation Corps workers in the national forests, plus those on state and private forest areas, more progress was made in the way of building trails and fire lanes, reforestation of denuded areas, destruction of dangerous insects and diseases and cleaning up of fire hazards than would have been accomplished in an ordinary decade. On the other hand, the forests offered the finest possible environment for rehabilitation of young men, their work there fitting them to again take their places in the world at large when opportunity offered.

The abolishment on May 27, 1935, of the Lumber Code promulgated under the National Recovery Act and in effect for a little less than one year, was followed by only slight confusion and moderate changes in prices, the manufacturers and dealers adhering rather closely to the policies adopted under the code. It is thought that the code aided forestry by bringing to lumbermen in general a clearer understanding of the technic and need of sustained yield management with all its accruing benefits in permanent and prosperous industries and communities.

Forest Protection. Fire, ever the enemy of the forest, reaped its toll in the early months of 1935. Up to September 1 there were recorded a total of 7795 fires in the national forests. As compared with an average of 6373 for the same period of the preceding four years, this was a drastic increase, yet numbers failed to complete the story for the total area burned was not much over one half the average. Better organization and training of fire fighting forces, new roads in the forests and the

splendid assistance rendered by CCC workers made possible this more effective control. Critical conditions early in the year in the Southeastern States accounted for almost half the area burned. As an indication of improved skill in combating fires, only 2 workers lost their lives in action as compared with 17 in 1934.

Counted by many as the most serious forest tree disease to appear since the chestnut blight, the Dutch elm disease was fought with great vigor in the region surrounding New York City. More than 600,000 elms were cut and burned in the 4500 square miles of New Jersey, New York, and Connecticut most seriously affected. Apparently distributed by at least one bark beetle species, the disease was found over a wide area but fortunately more or less concentrated in greatest intensity within a comparatively limited zone. To aggravate the situation, outbreaks were discovered in scattered sections of the nation at points in Virginia, Maryland, and Indiana. None would prophesy the outcome of the battle to eradicate this threat to one of North America's finest shade trees but many were hopeful that the favorable action of President Roosevelt in allotting on July 23, \$2,500,000 to continue the fight would bring ultimate success.

Great Plains Shelterbelt, THE. Despite a great decrease in publicity, real progress was made in the spring of 1935 in instituting work on the projected shelterbelt which is planned to extend ultimately from Mitchell, Nolan, Taylor, and Callahan counties in Texas northward to the Canadian border. As proposed, the belt will comprise 100 parallel plantings 10 rods wide and a mile apart, so located as to intercept the prevailing winds. Actually 125 miles of shelterbelt was established in the spring of 1935 in scattered sections in all the States concerned. In addition, 4800 acres were planted on farms within the shelterbelt area. A total of 56 million seedlings were grown for 1936 planting.

National Forests, THE. When the 1,860,117 acres of forest land acquired under the Weeks' Law but not yet transferred into the national forests by proclamation or Executive order were added to the regular accessions, the net increment to the national forests during the 12 months ended June 30 was over two and one-half million acres. This substantial gain was accomplished by purchase, exchange, and actual donation. The largest single accession, 83,042 acres to the St. Joe National Forest in Idaho, was the result of private donations. The report of the National Resources Board issued in 1934 indicated that the national forests should be enlarged by approximately 132,000,000 acres, thus placing the ultimate goal far in the future.

Lumber Trade, THE. Consistent but not striking gains were experienced in the lumber trade during the first nine months of 1935 as compared with the corresponding period of 1934. The values of imported unmanufactured wood, sawmill products, wood manufactures, paper base stocks, and paper and manufactures thereof as presented in the December *Monthly Summary of Foreign Commerce of the United States*, totaled \$177,271,697 in 1934 and \$204,646,457 in 1935. The total values of exports of the same classification were \$89,465,087 in 1934 and \$91,732,720 in 1935. Paper base stocks and paper continued to be the major import items and constitute a rather sad reflection on the ruthless lumbering policies which have resulted in the large idle areas of cut over lands in northern States that might well be producing at least a sub-

stantial portion of the paper base requirements.

The timber cut on the national forests in the fiscal year ended June 30 was over 752 million board feet as compared with 674 million odd feet in the preceding 12 months. At the same time grazing fees were received for over a million cattle, approximately 30,000 horses and over six million sheep. Not the least valuable use of the national forest was recreation. The number of persons making use of the recreational features of the national forests reached a peak in 1935 and promised to climb higher as the trails and bridges constructed by CCC and other workers render the forests more accessible.

Miscellaneous. President Roosevelt, on January 29, was presented by the Society of American Foresters with the Sir William Schlich Bronze Medal in tribute to his notable achievements in the advancement of forestry. The President was the first American to receive this award.

A tablet of bronze was placed in the Harvard Forest at Petersham, Massachusetts, on June 9, in honor of the late Richard T. Fisher, former dean of the Harvard University School of Forestry and Director of the Forest during its first 25 years. President Conant of the University made the principal address and paid splendid tribute to his former friend and associate.

The opening of the Rocky Mountain Forest and Range Experiment Station, with headquarters at Fort Collins, Colo., and serving Colorado, Wyoming, and portions of adjacent States, was a matter of gratification to foresters as it completed the chain of federal forest experiment stations authorized by the McSweeney-McNary Act.

Gifts to the United States of 1680 acres of short-leaf pine forest in southern Arkansas and 1600 acres of typical northern hardwood forest near Williamstown, Mass., both specifically for research, are certain to benefit experimental forestry in the respective areas.

At Lake Placid, on Sept. 12, 13, and 14, 1935, New York State celebrated the completion of 50 years' progress in forest conservation with a fitting programme of papers by prominent local and national leaders.

Necrology. George Dupont Pratt, former president of the American Forestry Association, died at Glen Cove, L. I., on Jan. 20, 1935. Generous in his gifts to further forestry research and education in general, Mr. Pratt was recognized as a militant leader of forces urging the rational conservation of American forests and forest resources.

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FORMOSA or TAIWAN. An island belonging to Japan. Area, 13,890 sq. miles including Pescadores Islands (49 sq. m.). Population (1933), 5,060,507 including 4,759,197 natives and 256,327

Japanese. Chief cities: Taihoku, the capital, 275,675 inhabitants in 1933; Tainan, 106,242; Keelung, 80,390; Takao, 72,400; Kagi, 62,963; Taichu, 61,857; Shinchiku, 50,635.

Production and Trade. Rice (45,103,232 bu. in 1934), raw sugar (923,500 metric tons in 1934-35), camphor and camphor oil (exports in 1933 were valued at Y2,728,000), coal (1,533,000 metric tons in 1933), gold (652 kilograms in 1933), tea (9300 metric tons in 1933) are the main products. Livestock (1933): 1,753,963 swine, 286,255 buffaloes, 90,084 goats, 80,851 cattle, and 333 horses. In 1934, total imports amounted to Y215,021,701 of which Japan supplied Y176,990,734; total exports, Y305,928,680 of which Japan took Y279,410,271 (yen averaged \$0.2972 for 1934).

Government. The budget for 1934-35 was estimated to balance at Y110,821,261. For 1933-34, revenue amounted to Y130,812,152, expenditure, Y102,220,615. The government was administered by a Japanese governor-general (in 1935, Kenzo Nakagawa).

History. On Oct. 8, 1935, an air mail and express service was inaugurated between Fukuoka in Japan and Taihoku in Formosa. See EARTHQUAKES.

FORT PECK DAM. See DAMS.

FOULKE, WILLIAM DUDLEY. An American author and publicist, died in Richmond, Ind., May 30, 1935. He was born in New York, Nov. 20, 1848, and graduated from Columbia College in 1869 and Columbia Law School in 1871, being admitted to the bar the previous year. He practiced law for a time in New York City, and became interested in the Young Men's Mutual Reform Association, which assisted in the overthrow of the Tweed ring in New York City politics. In 1876 he moved to Indiana, where he resumed his law practice, paying special attention to railroad law. He was elected to the Indiana State Senate in 1883, serving until 1885, when his refusal to support James G. Blaine for President cost him the renomination. In his last year in the Senate, his bill for the establishment of Civil Service Reform in that State was defeated. Subsequently he organized the Indiana Civil Service Reform Association and was its first president. He was a leader in the investigation of the Indiana State Hospital for the Insane and the disclosures of the grave maladministration of that institution, due principally to the spoils system, aided in breaking the control of the Democratic party in the State.

During the years 1889 to 1890, as chairman of a special commission, Mr. Foulke conducted investigations of the Federal Civil Service and the subjects of Congressional patronage, political changes in the post office, etc., were considered in detail, with the result that the administration of President Harrison was severely censured. The women's suffrage movement claimed his interest about this time, and in 1893 he was chairman of the Suffrage Congress held in Chicago, having previously been president of the American Woman's Suffrage Association.

About 1890 he gave up his law practice to devote all his time to civil reform, particularly in relation to the civil service and the spoils system. President Theodore Roosevelt appointed him a member of the Civil Service Commission in 1901, a position he held until 1903. In 1909 he turned to journalism, which had always held an attraction for him, and for three years was editor of *The Evening Item* at Richmond, Ind. Becoming interested in the Progressive movement through his

friendship with President Roosevelt, he served as a member of the platform committee during the campaign of 1912. For five years, from 1910 to 1915, he was president of the National Municipal League, and from 1923 to 1924 he served as president of the National Civil Service Reform League, and as such headed a delegation to President Coolidge to urge reform in the methods of appointing postmasters.

Mr. Foulke was the author of *Slav or Saxon* (1887; 3d edition, 1904); a biography of *Oliver P. Morton, War Governor of Indiana* (1898); *Maya, a Story of Yucatan* (1900); *Protean Papers* (1903); a translation of Paulus Diaconus' *History of the Langobards* (1906); *Dorothy Day, a novel* (1911); *Maya, a dramatic poem* (1911); *A Hoosier Autobiography* (1922); *Is Our Civilization Really Declining?* (1923); *A Random Record of Travel During Fifty Years* (1925); *Roosevelt and the Spoilsmen* (1925); *Songs of Eventide* (1928); and various papers relating to civil service.

FRANCE. Area and Population. France has an area of 212,728 square miles and a population estimated in 1934 at 41,940,000 (41,834,923 at the 1931 census). The population is half urban and half rural. The movement of population in 1934 was: Births, 677,365 (682,680 in 1933); deaths, 634,525 (661,082); marriages, 298,192 (315,466); divorces, 20,273 (20,699). During 1934 71,538 foreign workmen entered France and 40,104 were repatriated. The chief cities, with their 1931 populations, are: Paris proper, 2,891,020 (4,887,464 with suburbs); Marseille, 800,881; Lyon, 579,763; Bordeaux, 262,990; Nice, 219,549; Lille, 201,568; Toulouse, 194,564; St. Etienne, 191,088; Nantes, 187,343; Strasbourg, 181,465; Le Havre, 165,076; Toulon, 133,263; Rouen, 122,957; Nancy, 120,578; Roubaix, 117,190; Reims, 112,820; Clermont-Ferrand, 103,143.

Education. About 7.4 per cent of the population over five years of age was illiterate in 1931. Primary education is free and compulsory. In 1933 there were 4,723,147 pupils in the elementary schools, 236,501 in secondary schools, and 84,658 in 17 universities.

Agriculture. Approximately 38 per cent of the 1931 working population was engaged in agriculture, compared with 31 per cent in industry and 11.5 per cent in commerce. In 1932 52,924,000 acres, or 39.4 per cent of the total area, was under crops, 27,502,000 acres were meadow and pasture, 6,213,000 acres were devoted to orchards and vineyards, and 25,705,000 acres were wooded. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in thousands of units): Wheat, 338,511 bu. (362,328); rye, 32,984 bu. (35,338); barley, 47,496 bu. (52,594); oats, 302,060 bu. (390,883); corn, 20,073 bu. (17,123); potatoes, 611,887 bu. (544,601); sugar beets, 8790 metric tons (7461); beet sugar (1934-35), 1199 metric tons (945); wine, 2,064,330 gal. (1,367,499); olives (1934-35), 129,522 gal. (58,875); hay, 9935 metric tons (10,554); fodder beets, 30,540 metric tons (29,156); green forage, 10,616 metric tons (11,043). The 1935 wheat crop totaled 7,586,866 metric tons. Livestock in 1934 included 15,704,000 cattle, 7,044,000 swine, 9,571,000 sheep, 3,183,000 horses, mules, and asses, and 1,405,000 goats.

Mining and Metallurgy. Mineral and metallurgical production in 1934, with 1933 statistics in parentheses, was (in 1000 metric tons): Coal, 48,638 (47,041); coke, 3846 (4101); briquets, 5992 (5488); iron ore, 32,304 (30,409); iron pyrites,

155 (168); potash (K₂O content), 379 (326); bauxite, 539 (478); pig iron, 6155 (6324); steel ingots and castings, 6147 (6631); iron and steel (finished products), 4265 (4596). Pig iron production in 1935 was 5,799,000 metric tons; steel, 6,264,000; coal, 46,212,000.

Manufacturing. The output of the leading manufacturing industries in 1934 (with 1933 figures in parentheses) was: Silk (conditioned at Lyon), 2,856,000 lb. (2,625,000); wool (conditioned at Roubaix-Tourcoing), 70,315,000 lb. (94,858,000); wool (conditioned at Mazamet), 31,800,000 lb. excluding September (34,001,000); cotton consumption (year ending Jan. 31, 1935), 489,621,000 lb. (542,315,000); boots and shoes, about 50,000,000 pairs (55,000,000); alcohol, 124,332,000 gal. (111,390,000); vessels launched, 28,000 gross tons (33,000). The general index of industrial production (Base: 1929 equals 100) was 68.6 in 1932, 76.7 in 1933, 71 in 1934, and 67 in 1935.

Foreign Trade. The drastic decline in French foreign trade during the period 1929-35 is shown in the accompanying table.

FRENCH FOREIGN TRADE, 1929-35
[In millions of francs]

Year	Imports for consumption	Exports of French products	% Exports of imports
1929	58,221	50,139	86.1
1930	52,511	42,835	81.6
1931	42,206	30,436	72.1
1932	29,808	19,705	66.1
1933	28,425	18,474	64.9
1934	23,061	17,822	78.1
1935	20,946	15,428	73.6

French foreign trade in 1935 continued to suffer from the handicap of high domestic prices and the severe competition of exports from the countries with depreciated currencies. In 1934 imports declined nearly 20 per cent in value from the 1933 level, while exports were only 3½ per cent less. The French colonies supplied more than 25 per cent of the 1934 imports and purchased 31 per cent of the total exports. Algeria remained France's best customer and the leading source of imports, with Germany taking second place in both categories. The accompanying table shows the distribution of French trade, by leading countries, in 1933 and 1934.

FRENCH TRADE BY COUNTRIES, 1933 AND 1934
[In millions of francs]

Country	Imports		Exports	
	1933	1934	1933	1934
All French Colonies	6,730	5,813	5,989	5,502
Algeria	3,864	2,786	3,310	3,073
Germany	2,928	2,218	1,714	1,979
United Kingdom	1,894	1,637	1,678	1,536
Belgium and Luxembourg ..	1,803	1,470	2,141	1,977
United States	2,935	2,216	868	836
Switzerland	613	523	1,330	1,266

The value of the principal commodities imported for consumption in 1934 was (in 1000 gold dollars): Wines, 74,088; coal, 65,042; wool, 51,972; raw cotton, 40,782; machinery, 39,375; oilseeds, 36,235; fruits and nuts, 32,174; crude petroleum, 30,815. The value of the chief exports of French products was (in 1000 gold dollars): Chemicals and dyes, 45,630; iron bars, blooms and billets, 32,861; cotton fabrics, 31,884; metal manufactures, 30,958; machinery, 30,504; other heavy iron and steel, 29,057; wool, 28,558.

U.S. statistics showed general imports from France in 1935 of \$58,332,861 (\$61,037,255 in

1934) and exports to France of \$116,920,014 (\$115,703,916 in 1934).

Finance. French budget operations for the nine-months period ending Dec. 31, 1932, and for the calendar years 1933, 1934, and 1935 are shown in the accompanying table from the League of Nations *Statistical Year-Book, 1934-35*.

FRENCH BUDGET OPERATIONS
[In millions of francs]

Year	Receipts (excl. loans)	Expenditures	Deficit
1932 * (Apr. 1-Dec. 31) .	35,405.5	41,442.3	6,016.8
1933 *	43,652.2	50,572.1	6,919.9
1934 *	48,281.4	50,162.6	1,881.2
1935 *	46,992.0	47,817.0	825.0

* Closed accounts. * Estimates. * The decrees of July 18, 1935, provided for increases in revenues and reductions in expenditures aggregating 7,063,000,000 francs.

According to preliminary returns, the actual deficit in 1935 was approximately 5,212,000,000 francs on total receipts of 33,504,000,000 francs, compared with an actual deficit of 1,742,000,000 francs on receipts of 35,246,000,000 francs in 1934. The ordinary budget for 1936, as approved Dec. 31, 1935, estimated revenues at 40,450,000,000 francs and expenditures at 40,438,000,000. An extraordinary budget of 6,265,000,000 francs was to be obtained by borrowing.

The public debt of France increased from 298,746,000,000 francs on Sept. 20, 1933, to 311,019,000,000 francs on Aug. 31, 1934. Of the latter sum, 4,011,000,000 francs represented the external debt and 307,008,000,000 francs the internal debt. The internal floating debt was 53,929,000,000 francs. The franc (par value on Apr. 1, 1935, \$0.0663) exchanged at an average of \$0.0393 in 1932, \$0.0503 in 1933, and \$0.0657 in 1934.

Communications. Excluding about 12,000 miles of local lines, France in 1932 had 27,186 miles of railway line in operation, consisting mainly of seven large systems (two under state ownership and five privately owned but operated by the state). During 1932 the railways carried 725,193,000 passengers and 193,000,000 metric tons of freight, the gross receipts being 14,614,000,000 francs. In 1933 and 1934 gross receipts of the seven main systems totaled 11,378,511,447 and 10,836,416,010 francs, respectively. Highways extended 393,740 miles in 1934 (national roads, 49,800 miles). There were 6173 miles of navigable rivers and canals, the traffic on which aggregated 51,009,000 metric tons in 1934. Civil air lines in 1934 carried 46,822 passengers, 483,880 lb. of mail, and 2,961,700 lb. of express freight.

Shipping. The French merchant marine on June 30, 1935, aggregated 3,025,100 gross tons measurement (3,298,100 on June 30, 1934). The French liner *Normandie*, which completed her maiden voyage to New York on June 3, 1935, was the largest ship afloat. She established a transatlantic speed record of 107 hours, 42 minutes. During 1934 27,117 vessels of 52,583 net register tons capacity entered French ports with cargo in the overseas trade, compared with entrances of 27,635 vessels of 53,674,000 tons in 1933.

Government. The Constitution of 1875 vests executive power in the President, acting through a ministry selected by him but responsible to Parliament. Legislative power rests in the Chamber of Deputies and the Senate, the members of which jointly elect the President for seven years. The Senate has an authorized membership of 314 (305 actual members at the beginning of 1935), all 40 years or more of age and chosen by an electoral

college for terms of nine years. The Chamber has an authorized membership of 615 (5 seats were unfilled at the beginning of 1935), elected by direct manhood suffrage for four years. Premier at the beginning of 1935, Pierre-Etienne Flandin (Left Republican), heading a coalition of the Left and Centre parties, with Right support.

HISTORY

France during 1935 was ridden by three ever-present fears—the fear of a general European war in which she would inevitably be involved, the fear of civil warfare between the forces of the Left and Right, and the fear of a financial collapse involving devaluation of the currency and the wiping out of a large share of the national savings. These three fears reacted upon one another in a vicious circle, augmenting the danger presented by each. The increasing severity of the economic and financial depression exacerbated the mutual hostility on economic and political issues of conservatives and liberals, of Fascists and radicals. The threat of civil war and the financial crisis tied the hands of the government and rendered it incapable of decisive leadership in the international field at a time when French security and French prestige were both at the lowest level of the post-war period. Dissension and economic disorganization in France invited attack from without and the danger of another foreign war added to France's economic difficulties and stirred up further hostility between French factions.

The Economic Situation. In place of the economic revival experienced by most of the other great industrial nations during 1935 the grip of the world depression tightened steadily upon France. The index of French industrial production, which averaged 140 in 1930, stood at 93 for 1935. At the end of the latter year only 50 per cent of French workmen were employed full time; the number of registered unemployed on Nov. 30, 1935, was 453,838 compared with 416,605 on Nov. 30, 1934. The value of imports in 1935 declined 2,152,000,000 francs and that of exports fell 2,377,000,000 francs below the 1934 level. While the government's continued deflationary policy had reduced purchasing power, the cost of living had fallen but little. These conditions reflected the paralysis of business which became progressively worse during the course of the year. Few businesses reported profits and only the increasing intervention of the government in a thousand directions to bolster the economic structure prevented more wholesale bankruptcies. The moribund condition of business was evidenced by the steady falling off in tax receipts, despite successive increases in rates. In December, 1935, the tax returns fell 5,212,000,000 francs under the budget estimates. The budget thus continued to run a substantial deficit, in spite of drastic economies imposed during the year. In the five-year period 1930-35 the national debt had increased by 70,000,000,000 francs as a result of successive budget deficits, and the government in 1935 found it increasingly difficult to cover the deficit by borrowing.

The budget issue was the crux of the financial difficulties which twice during 1935 induced a flight from the franc and a substantial drain on the Bank of France's large gold reserve. The inability of successive cabinets to balance the budget, coupled with repeated financial scandals involving highly placed officials, had deeply undermined the confidence of the French people in their govern-

ment and induced widespread fears of a monetary crisis which would force the devaluation of the franc. The drain on the gold reserve of the Bank of France induced by such fears amounted during 1935 to 16,000,000,000 francs, or approximately \$1,500,000,000. The total gold reserves of the Bank stood at 66,296,000,000 francs on Dec. 31, 1935, compared with the total of 82,124,000,000 francs a year earlier. Without a revival of commercial activity, there was little hope of restoring confidence and balancing the budget. The government during 1935 strove desperately to stave off devaluation of the franc in the hope the business revival abroad would spread to France and relieve the economic crisis. Few favorable indications were visible on the economic horizon as the year closed, however, and the pressure for devaluation as a means of starting the wheels of industry and trade was becoming daily more insistent. It is against this economic and financial background that the acts of successive French Cabinets during 1935 must be viewed.

The Flandin Ministry. The Ministry of National Union formed by Pierre-Etienne Flandin on Nov. 9, 1934, represented a coalition of diverse and mutually hostile political groups ranging from the Radical Socialists on the Left to the Republican Centre party on the Right. It was predicated upon a continuation of the political truce established by Premier Doumergue after the Paris riots of February, 1934, had threatened to overthrow the republic (see 1934 YEAR BOOK, pp. 245-247). During the last two months of 1934, Premier Flandin had succeeded in restoring much confidence and arousing hope that the depression would be mastered. But fairly early in 1935 it became evident that he was making no headway and this fact, combined with the hostility towards him among both the Radical Socialists and the parties of the Right, led to his overthrow on May 31.

Early in January M. Flandin explained in a radio broadcast his programme to stimulate economic recovery. He stood for a balanced budget and for maintenance of the existing value of the franc. At the same time he set out to restore a freer economy in which the laws of supply and demand would be allowed to maintain an automatic equilibrium, free from state interference. The gradual reduction of barriers to international trade also was envisaged. As a preliminary step in this direction he undertook, somewhat paradoxically, a policy of rationalization of industry, coupled with an easy-credit policy. He declared that the balancing of production and consumption was necessary before a free market could be re-established. Temporarily, at least, he sidetracked the demands for constitutional and electoral reform which had caused the overthrow of the Doumergue Ministry in 1934.

The laws for regulating the production and marketing of wheat and wine, promulgated Dec. 24, 1934, represented the first step in M. Flandin's economic programme (see 1934 YEAR BOOK, p. 247). Supplementary to these measures, he removed Clément Moret, staunch anti-inflationist governor of the Bank of France, and appointed Jean Tannery to the post on January 2. The Premier hoped in this way to force the Bank of France to rediscount Treasury bills more readily. As a further move towards stimulating industry by providing easy money and credits, he obtained authority to increase the short-term bond issues of the Treasury.

On January 10 M. Flandin continued his offensive against the depression by introducing a bill for the regulation of industry which was similar in many respects to the National Industrial Recovery Act in the United States. Under the measure producers in any branch of industry were authorized to restrict and regulate production, fix wages and hours of labor, etc. If approved by the government and by two-thirds of the concerns, producing at least three-fourths of the entire output of the industry, such regulations might be declared compulsory for the entire industry. To further the general aim of adjusting production to consumption and guaranteeing a profit to the producer and a fair price to the consumer, the government might also extend help to a particular industry in the form of tariff protection, financial subvention, or import quotas. The bill aroused much opposition, particularly among the radical parties, whose spokesmen described it as a measure to reduce the French laborer to a "coolie" standard of living. It was still under discussion when Parliament recessed in April. Meanwhile the critical state of Europe caused the Chamber of Deputies to increase the term of service for conscripts to two years, to approve the construction of the first of two 35,000-ton battleships, to expand the air force, and to appropriate funds to encourage the enlistment of professional soldiers in the army.

These measures served to throw the budget still more out of balance at a time when the threat of a taxpayers' strike by the semi-Fascist Peasants' Front and other factional discords were undermining confidence in the government. Speculative attacks against the gold standard currencies, which followed the devaluation of the belga by the Belgian Government on March 29, shifted from the Swiss franc and the Netherlands guilder to the French franc in May. The decided swing to the Left revealed in the local elections of May 5 and 12 made it more unlikely than before that measures would be taken to balance the budget. The resulting flight from the franc was in full swing when Parliament reconvened on May 28. The same day the Bank of France raised its discount rate to 6 per cent, the highest since 1926.

To meet this crisis, the Flandin Government asked Parliament for unlimited authority to take whatever steps were necessary to restore government finances and promote economic recovery. After a dramatic debate the Chamber of Deputies rejected the request by the decisive vote of 353 to 202, with the Radical Socialist deputies joining forces with those of the Right parties in overturning the ministry. A new cabinet formed by Fernand Bouisson on May 31 made the same request for emergency powers and met the same fate when on June 4 the Chamber decisively rejected the proposal. Fear that the granting of emergency powers would pave the way for dictatorship was apparently a deciding factor in the Chamber's adverse decision.

The Laval Cabinet. Meanwhile the flight from the franc continued, spurring the efforts towards the formation of a new government. On June 7 Pierre Laval succeeded in assembling another coalition, with himself as Premier and Minister of Foreign Affairs and with the all-important Finance portfolio in the hands of Marcel Régnier, the former Minister of Interior. The cabinet lineup represented largely a reshuffling of the preceding two cabinets; M. Flandin, Edouard Herriot, leader of the Radical Socialists, and Louis Marin,

a leader of the conservative Republican Federation, were all included as Ministers of State. M. Laval also made a request for emergency powers, but under conditions which placated both the Left and the Right, and early on June 8 the Chamber approved his request by a vote of 324 to 160. M. Laval promised that he would use his extraordinary powers only to defend the franc and to curb speculation; that he would not make unjust cuts in expenditures and that he would consult with parliamentary committees during the period when Parliament was not in session. The emergency powers were to expire October 31 and all decrees were to be ratified by Parliament before the end of the year. With the formation of the Laval Ministry, the flight from the franc and the drain on the nation's gold reserves were ended for the time being. Parliament adjourned for the summer on June 28, leaving the cabinet several months during which to put its emergency programme into effect.

The drastic nature of the ministry's measures was revealed on July 17 when a series of decrees was issued providing for economies and new revenues aggregating nearly 11,000,000,000 francs. All government salaries and pensions were cut from 3 to 10 per cent and a 10 per cent cut in interest payments was imposed upon all holders of government obligations. At the same time steps were taken to reduce the cost of living. The price of bread and coal was lowered; house and apartment rents below a certain minimum were reduced; and utility rates were slashed. At the same time higher taxes were levied on the larger incomes. The rate on incomes over 80,000 francs was raised 50 per cent, and that on bearer bonds from 17 to 24 per cent. A special levy of 25 per cent was imposed on profits from the manufacture of war materials.

The financial crisis which preceded the formation of the Laval Government had accentuated the danger to the Republic from the various Fascist and royalist groups, the most important of which was the Croix de Feu under Col. François de la Rocque. During June the Croix de Feu displayed great activity. At numerous secret mass meetings of the organization Colonel de la Rocque declared that the hour for a Fascist dictatorship was near. This threat, supported by armed groups throughout the country, aroused the Left elements to action. The Socialist-Communist united front established in 1934 was expanded to include the Left wing of the powerful Radical Socialist party and various other radical organizations. On Bastille Day (July 14) all of the 48 groups participating in the Leftist Popular Front joined in a great demonstration in Paris which gave impressive evidence of their determination to defend democracy and "place French liberties beyond the reach of fascism."

The Popular Front also mobilized the opposition to the Laval Government's economy decrees, which created much discontent among the civil servants and labor unions. When the government applied a 10 per cent wage cut in its naval arsenals and the subsidized French Line put similar reductions into effect, violent protest strikes occurred. During the week of August 10 strikers demonstrating against the government engaged in pitched battles with the police in Brest and Toulon. Six strikers were killed and numerous others injured. Eventually the strike among the French Line employees was settled, but unrest among the workers continued rife.

The violence of the strikers strengthened the government rather than the Popular Front, as there was a public reaction against the latter. Accordingly Premier Laval on August 9 proceeded to extend his rehabilitation programme by issuing another set of economy decrees. They provided for a lower legal limit on interest rates for commercial loans, a reduction of 10 per cent in land leases and in rents paid for business premises, a higher tax on profits earned by directors of business concerns, and an additional levy on profits realized on governmental contracts. The government also established a committee to regulate meat prices and relaxed slightly the restrictions imposed by import quotas upon foreign trade. A public works programme was also developed. The Bank of France was induced to assist the Agricultural Credit Corporation in making low-interest-bearing loans to farmers. By these and numerous similar measures, the government assumed direction over private business and a direct financial interest in it on a scale never before known in France. Premier Laval defended this wholesale state intervention by stating that "the fate of the régime and the life of the country are at stake." In general his programme won the support of the country, but among the more radical elements and among the proponents of currency devaluation his deflationary methods were attacked as wrong in principle and bound to fail.

The economic system showed no very encouraging response to these drastic measures. On the other hand agitation by the mutually hostile Fascists, Peasant Front, and Leftist Popular Front grew more violent. Frequent clashes enlivened the meetings and demonstrations of these rival groups. The growing cleavage between the Right and the Left dominated the Senatorial elections of October 9, which showed a slight swing away from the moderate Radical Socialists towards the more radical Socialists and Communists. Smarting under the loss of eight seats, the Radical Socialist party congress which met in Paris immediately afterwards showed increasing dissatisfaction with the moderate leadership of Edouard Herriot, although he was reelected party leader. The party went on record as favoring laws for the dissolution of the Croix de Feu and other armed Fascist leagues and prepared to form its own military organization if the Fascist groups were not disbanded.

Dependent upon the Radical Socialists for the continuance of his government, Premier Laval on October 23 issued three decrees designed to maintain public order. They imposed a moderate curb on Fascist activities. The Radical Socialists, however, declared them wholly inadequate. On October 31 the government loosed another veritable avalanche of more than 400 decrees, both political and economic in nature. The attempt to stimulate recovery through deflation was extended, while further restrictions were imposed on political agitation. Some of these decrees had a distinctly Fascist tinge, increasing the deep suspicion with which the members of the Popular Front viewed Premier Laval. On November 16 another clash between the Croix de Feu and the Popular Front occurred at Limoges, in which a number of Popular Front members were injured. The threat of bloody civil strife seemed serious when parliament reconvened on November 28.

Premier Laval insured a vote of confidence on his financial policy by reaching a compromise agreement with the Radical Socialists with respect

to his economy decrees. But he seemed unwilling to accede to the Radical Socialist demand for the disarmament and more strict supervision of the Fascist groups. The cabinet seemed in danger of defeat on this issue through withdrawal of Radical Socialist support when on December 6 a spokesman for the Croix de Feu proposed the disarmament of all political groups and the disbandment of semi-military organizations. The proposal was accepted with enthusiasm by the Socialists, Communists, and Radical Socialists and Premier Laval immediately introduced bills providing for the dissolution of private militias, prohibiting the carrying of firearms, and imposing penalties for incitement to assassination in the press. On the strength of these measures the government won a vote of confidence, 351 to 219. But Leftist amendments to the bills were denounced as a betrayal by the Fascist groups and it was December 28 before the measures were finally passed.

Premier Laval was successful also in securing passage of the 1936 budget in record time, but it was only the reluctance of the Radical Socialists to assume power in advance of the May, 1936, elections that prevented his overthrow on the issue of foreign policy. Edouard Herriot resigned the presidency of the Radical Socialist party on December 18 because of the violent attacks upon the cabinet of which he was a member. On December 28 the Premier weathered by the narrow margin of 20 votes a bitter attack from the Left on his effort to straddle the issue raised by Italy's aggression in Ethiopia and to remain on friendly terms with Britain, Italy, and the League alike. Thus the year closed with M. Laval successful in dexterously steering his course through the exceptionally stormy seas of French politics. The budget was balanced, on paper at least—armament expenditures aggregating more than 6,000,000,000 francs had been incorporated in a separate loan budget. Tension between the Left and the Right had been temporarily eased. But business had failed to show any marked improvement. It was certain that the budget issue, the Fascist menace, and the question of foreign policy would soon reappear in an urgent manner and that they would determine the outcome of the quadrennial parliamentary elections due in May, 1936.

Other Domestic Events. On March 14, after 15 months of investigation, indictments were returned against 20 former associates of the swindler Alexandre Stavisky, whose wholesale defrauding of investors in bonds of the Bayonne municipal pawnshop caused the most malodorous scandal in modern French politics (see 1934 YEAR BOOK, p. 245). The trial opened on November 4 and was still under way at the end of the year.

The French Colonial Conference at Paris adjourned on April 13 after sessions lasting four months during which the economic relations between France and the colonies were closely studied and plans laid to promote trade and investment. The conference arranged to establish a permanent colonial bureau in Paris. The maiden voyage of the 79,000-ton *Normandie*, the world's largest liner, stimulated French national pride in the midst of many adversities. The *Normandie* arrived in New York on June 3 after establishing a new transatlantic speed record of 4 days 11 hours and 42 minutes.

Foreign Policy. From 1918 to 1932 France had exercised unquestioned political and military supremacy in Europe. Against her army, reinforced by military alliances with the Little En-

tente (q.v.) and Poland, no other European combination could hope to make progress. But the resurgence of German power beginning with the triumph of Hitler in January, 1933, accompanied by internal strife and growing economic paralysis in France, spelled the end of French primacy. The year 1935 witnessed the culmination of the French decline, and the passing of European leadership to Great Britain.

The inaction and indecision of France in the face of Germany's withdrawal from the League of Nations and the Disarmament Conference in October, 1933, led during 1934 to the partial disintegration of the system of alliances upon which French power was based. Poland reached an understanding with Germany. The Little Entente formed a closer political and economic bloc and began to look to Soviet Russia rather than to France for aid in the struggle which all saw impending. Under Barthou's skillful guidance, the French Foreign Office seized the opportunity presented by Hitler's violent methods at home and in Austria to rebuild and extend its alliances. A working agreement with Britain was again established and the negotiations were begun which led to the settlement of Franco-Italian differences and the conclusion of a military alliance against Germany at Rome on Jan. 7, 1935. For the terms of this agreement, see *ITALY* under *History*.

The Franco-Italian rapprochement apparently completed the encirclement of Germany. But it caused further distrust of French leadership among the Little Entente States, particularly Yugoslavia. And the tacit assent which Foreign Minister Laval apparently gave to Mussolini's request for a free hand in Ethiopia was later to cause irreparable damage to French prestige and security. Temporarily, however, the Reich was ringed by powerful foes, whose unity was welded still further by Chancellor Hitler's announcement on March 16 of the reestablishment of conscription in Germany. This open defiance of the military provisions of the Versailles Treaty provoked notes of protest from Britain, France, and Italy. The French Cabinet on March 20 decided to bring Germany's action before a special session of the League Council and demanded consultation among the League powers to consider appropriate action.

The result of France's initiative and of the unsatisfactory conversations between Sir John Simon, the British Foreign Secretary, and Hitler held in Berlin late in March was the conference of the Prime Ministers and Foreign Ministers of Britain, France, and Italy at Stresa, Italy, on April 11-14. The conference served only as a warning to Germany against further overt action. The united front of the three powers was apparently strengthened and arrangements were made for bringing the French complaint against Germany before the League Council. At the same time Britain and Italy reaffirmed their obligations under the Locarno Treaties, i.e. to preserve by military force if necessary the existing frontier between France, Germany, and Belgium. Britain and Italy gave formal support to the Franco-Soviet project for an Eastern Locarno, guaranteeing the frontiers of Eastern Europe. The conference also approved Mussolini's project for a conference in Rome to settle the political and economic problems of the Danubian States.

In accordance with the Stresa agreements, the French resolution of censure against Germany was passed by the League Council on April 17, with only Denmark abstaining. It provoked an

explosion of wrath in Germany and contributed not at all to French security or prestige. The Reich on April 13 had again reiterated its opposition to an Eastern Locarno and Poland's objections sealed the doom of this carefully nursed project. In place of it M. Laval concluded with the Soviet Union on May 2 a pact of mutual assistance under which the two powers mutually guaranteed their respective territories against aggression by a third power (Germany). Immediately afterwards he visited Warsaw, where he attempted to calm Polish apprehensions aroused by the Franco-Soviet treaty, and Moscow, where M. Laval and M. Litvinov made a fresh attempt to revive the moribund Eastern Locarno idea.

Anglo-German Naval Treaty. With the signing of the Franco-Soviet mutual assistance pact, the encirclement of Germany appeared to be complete and French security seemed temporarily impregnable. But on June 18 the British shattered the Stresa front by suddenly concluding a naval treaty with Germany which authorized Germany to build a navy equivalent to 35 per cent of the British tonnage. This treaty, concluded without consulting either France or Italy, gave Germany the right to build a navy twice the size of that permitted under the Versailles Treaty. It thus placed Britain's signature upon an open violation of the treaty which the British at Stresa had agreed to defend against further infractions. Although the British action provoked furious resentment in France, a semblance of Franco-British collaboration was reestablished during conversations between Anthony Eden, Lord Privy Seal, and M. Laval at Paris on June 21 and 22.

The Ethiopian War. Almost immediately thereafter the development of the Anglo-Italian crisis over Ethiopia and Mussolini's preparations to violate the League Covenant by open aggression against the African kingdom revealed once more the weakness of France's foreign policy. For Britain, Italy, the Soviet Union, Poland, the Little Entente, and the League of Nations were all potential French allies against Germany and France was committed to all of them by a series of treaties which were in certain cases mutually contradictory. Mussolini's African adventure confronted France with the hard choice of either supporting Italy and antagonizing Britain and the League or of supporting Britain and the League and antagonizing Italy. But the British fleet and the Italian army were equally important to France in the event of war with Germany. Moreover Laval could not openly oppose League sanctions against Italy without running the danger of blunting a weapon which the French for years had been perfecting as a means of defense against Germany.

Faced with this dilemma, and harassed by divided opinions at home, M. Laval attempted the difficult task of keeping the good will of all parties to the dispute. He worked unceasingly to prevent an open break between Britain and Italy, meanwhile professing attachment to the League Covenant but opposing efforts to apply the Covenant vigorously against Italy. The strong line taken by Britain, however, gradually forced the French to take a definite stand in support of the League Covenant. Doubtful of France's position the British, after the launching of the Italian invasion of Ethiopia on October 3, demanded from M. Laval an unequivocal statement as to whether Britain could count upon French aid in the event of an Italian attack upon the British fleet in the Medi-

terreanean. France was warned that if she did not support Britain against Italy, she could not count on British aid if Germany violated the Locarno treaty or reoccupied the demilitarized zone of the Rhineland.

On October 18 M. Laval gave the British Government a written pledge of military, air, and naval assistance on condition that Britain would "not take the initiative in any measure against Italy which would not be in conformity with decisions taken or to be taken by the League of Nations in full agreement with France." On the basis of this pledge conversations were held between the French and British staffs during which plans for joint action were elaborated. The French also joined reluctantly in applying League sanctions against Italy, meanwhile continuing their efforts to negotiate a settlement of the Ethiopian problem between Britain and Italy. These efforts culminated in the Hoare-Laval peace plan of December, which offered Italy practically half of Ethiopia and which was swiftly killed by public opinion in Britain and in the smaller League countries as soon as the proposal was made public.

In France M. Laval was severely attacked by the parties of the Left for his Ethiopian policy and defended by the Right, which strenuously opposed an anti-Italian alliance with "British mystics." Paul Reynaud, the Radical Socialist spokesman in the parliamentary debate, declared amid the cheers of the Left that France had to choose "between Italy, which is in rupture with the Covenant, and Britain, the guardian of that Covenant." This choice still confronted France as the year ended. Meanwhile M. Laval's vacillations and his complacent attitude towards Mussolini's policy had completed the destruction of French prestige among the League powers, particularly among the small States who looked to the League Covenant as their main bulwark against aggression by the strong. These powers had rallied to Great Britain, which, in the words of an eminent American authority on international affairs "had snatched from feeble and fumbling French hands the leadership of Europe."

See ETHIOPIA, GERMANY, GREAT BRITAIN, ITALY, POLAND, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*; also LEAGUE OF NATIONS, LITTLE ENTENTE.

FRANQUI, ÉMILE. A Belgian statesman, died at Overysche, near Brussels, Nov. 16, 1935, where he was born in 1863. After attending a military academy, he entered the army in 1877, and in 1881 went to the Congo as a subaltern. By 1885 he attained the Commissionship of the Cataracts District. A member of the Bia Expedition from 1891 to 1892, on the death of Bia, he assumed the leadership, and by his able command won large tracts of territory containing great copper deposits. In 1896 he was sent to China, first as consul at Hangkow, and later as consul-general at Shanghai, in reward for his services to his country. Forseeing the advantages of private capital in China, he left the consular service and established La Compagnie Internationale d'Orient, which was the foundation of his large fortune in valuable coal and railway concessions in North China.

In 1905, M. Francqui was introduced to a banking career by his partner in the Chinese enterprise, M. Jadot, and he became associated with the Banque d'Outremer in Brussels, subsequently becoming its president. During the German occupation of Belgium he was president of the Comité

National. After the War he instituted, at the request of King Albert, the National Scientific Fund, and from that time on served his government in varied capacities. He came to the United States in 1920 to arrange a loan extension, and again in 1934, as a member of the committee that announced the accession of Leopold III to the throne.

He was a member of the Dawes Commission in 1924, and in 1926 received his first cabinet appointment as minister without portfolio in the Jaspar government. Through his knowledge and capabilities, the value of the franc was stabilized against almost hopeless odds, and the *belga* was devised. In 1934 he was invited to join the Theunis ministry as minister without portfolio, and in order to do so resigned all his banking connections, including that of representative of the National Bank of Belgium on the board of the Bank for International Settlements. He was not to be a mere figurehead in the cabinet, but was given the important task of holding the gold bloc together while pressing Great Britain and the United States to come to some sort of an understanding in the currency war.

As a member of the Board of the Bank for International Settlements, he devised a plan for the establishment of an international rediscount bank to finance exports as a means of checking the depression, but it did not materialize. During the post-War years he attended the major financial conferences, and his profound knowledge of inflation and deflation, as well as his great skill in the understanding of currency matters, made a great impression on the representatives of other governments, and made him the leader of the gold bloc.

M. Francqui was regent of the National Bank of Belgium, chairman of the Lloyd Royal Belge, and managing director of Union Minière du Haut Katanga, and in 1931 became governor of the Société Générale de Belgique. He also established the Francqui Foundation, which makes large grants to Belgian scientific research each year.

FRAZIER-LEMKE FARM MORTGAGE ACT. See UNITED STATES under *Congress*.

FREE CHURCH FELLOWSHIP, THE. A cooperative movement of liberal churches and individuals, first organized in 1933 under the name of the Free Church of America. The name was changed to the Free Church Fellowship as more accurately describing an enterprise which is not a new denomination or an organic merger of existing denominations but a liberal federation of churches and individuals. The American Unitarian Association and the Universalist General Convention are the only denominational members of the Fellowship, but individual Methodist, Community, Federated, and Independent churches belong, and individuals from other denominations are included in the Council and the Roll of Fellows. Rev. Louis C. Cornish, D.D. of Cambridge, Massachusetts, the President of the American Unitarian Association, was the first President of the Free Church Fellowship. He has been succeeded by Rev. Frederick B. Fisher, D.D. of the Central Methodist Church in Detroit, Michigan, former Methodist Bishop of Calcutta, India. The Secretary is Rev. Charles R. Joy, D.D. who is administrative Vice-president of the American Unitarian Association. The headquarters of the Free Church Fellowship are at 16 and 25 Beacon Street, Boston, Massachusetts.

The principles of the Free Church Fellowship are stated as follows: *One*, we believe that Re-

ligion is ethical, that ethics is social, and that the church is the organized conscience of society. *Two*, we conceive our task to be: First, the cultivation of excellence, the promotion of character, the encouragement of the individual in his endeavor to realize through all his relationships, the principles of integrity and honor; and second, the uniting of individuals and churches for the upbuilding of human welfare. *Three*, we propose that the Free Church Fellowship shall be a union of religious liberals, a home for the emancipated spirit of man, whatever the forms of religious faith and worship.

By virtue of denominational membership, all Unitarian and all Universalist churches become members of the Fellowship by their own vote. All other churches become members by the vote of the Council of the Fellowship. Individuals become members by the vote of the Council or the Executive Committee.

FREEMASONRY. Anniversaries. Australasia. The centenary of Tasmania's Operative Lodge No. 1, as well as of the entire craft in that State, was observed at Hobart on February 25-28. But Masonic history in the antipodes dates back a full generation earlier, when "several officers of H.B.M.'s ships, together with some respectable inhabitants of Sydney" (N.S.W.) held a Masonic meeting despite the colonial governor's ban; and, in consequence, one of their number was banished. "The Lodge of Social Military Virtues, No. 227" attached to the 46th Regiment, worked under a warrant from the Grand Lodge of Ireland and appears to have been the earliest in Australasia.

Belgium. Le Grand Orient de Belgique, though actually founded in 1833, began the celebration of its first centenary on May 5 with a musical *soirée* conducted by about 30 musicians who are Masons. On May 6 the opera, *Merchant of Venice*, to which female relatives of Masons were invited, was staged in the Monnaie Theatre, Brussels, converted into a lodge room for the occasion. On Sunday, May 7, at a regular communication, a pageant was presented, illustrating the activities of Belgian Masons for education and world peace.

England. Old Union Lodge No. 46 of London has just completed 200 years of continuous existence, thereby earning the coveted privilege, enjoyed by but four other English lodges, of prefixing "CC" to its name.

Sweden. The bicentenary of Swedish Masonry was observed on various occasions during the year, beginning with January 28, the festival day of Stockholm Craft Lodge, when representatives were present from other Scandinavian Grand Lodges as well as from those of the British Isles and Netherlands.

Turkey. The silver jubilee of the Grand Orient was celebrated on Aug. 1, 1934, its establishment following about one week the Turkish revolution of July 24, 1909. Over 300 members attended the celebration at which Grand Master Mouhiddin Osman presided.

United States: California. On March 23, Cyrus E. Hull of Los Angeles (b. Oct. 28, 1830) celebrated his 82d continuous year as a Master Mason, having been "raised" in Hampden Lodge, Springfield, Mass. in 1853. This nearly reaches the record of longevity among Masons.

Illinois. On May 13, Bodley Lodge, No. 1 at Quincy celebrated its centenary, having been chartered by the Kentucky Grand Lodge in 1835, and being now the oldest continuously existing lodge in Illinois. Others which had been organized previ-

ously succumbed to the Anti-Masonic crusade of the 1820's.

Ohio. William E. Thompson, life member of Bethel Lodge, No. 61, celebrated his 100th birthday in June.

Oregon. Williamette Lodge, No. 2 observed its 85th anniversary on June 24, in the Portland Masonic Temple. Its first meeting was held in the upper story of a warehouse and it was one of the three constituent bodies forming the Oregon Grand Lodge in 1851.

Texas. The centenary of the Texas craft was commemorated on March 16 at Brazoria, where, just 100 years earlier, six Masons gathered under the "Masonic Charter Oak of Texas" to organize its first lodge. The present Grand Master of Texas Masons delivered the principal address, which was a prelude to the statewide centennial of 1936.

Washington. St. John's Lodge, No. 9, Seattle, observed its Diamond Jubilee on September 4, with an historical play, "Our Pioneer Founders," and the presentation to three of its veterans of half-century membership certificates.

Anti-Masonic Crusade. "The persecution of Freemasons in continental Europe within the past decade, appears to be spreading," notes the *New Age*, expressing what thoughtful observers of the craft have sensed for some time. It is no longer, as in Gambetta's day, merely *clericalisme, voila est l'ennemi*; now there is Fascism, Nazism, Bolshevism and every other form of autocracy, which sees in Masonry its natural foe. The International Masonic Association, at its 1934 convention in Luxembourg, called attention to current attacks on the craft and planned "interior and exterior defense" and the International Conference of Supreme Councils at Brussels, in June, rejected "the unjustifiable and unwarranted attacks against Freemasonry and Freemasons, in many lands, as unworthy of serious consideration by intelligent people."

Austria. It is reported that Masons are not considered eligible to posts under the present government and that Masonic meetings are not permitted except under police surveillance.

France. The attempt to involve Masons in the Stavisky scandal continues and a movement has been launched for an "Anti-Masonic Union," with the "Interparliamentary Groups for Action against Masonic Activities" as a directing committee. The latter, on July 5, issued a manifesto, declaring: "Freemasonry must be struck down; a struggle to the death has been commenced against it; and the national forces must now fight without truce or respite."

Germany. On May 28, the Ministry of the Interior announced the "voluntary dissolution" of 14 Masonic lodges, pursuant to the Goering decree of Jan. 8, 1934; and on August 8 all such lodges in the Reich were declared dissolved. The confiscated property of the "Three Globes" Lodge, largest in Germany, was returned to its trustees; but on November 9 the confiscation was announced of the property of eight Jewish lodges, under the anti-Communist law. In mid-September, Dr. Hjalmar Schacht, Minister of Economics and a former Freemason, refused to permit an inquiry into the Masonic antecedents of his subordinates. Curiously enough, while thus destroying the German Masonic craft, the Nazi leaders have taken a leaf out of its experience and are attempting to regiment all German skilled labor, into "craftsmanship chambers," each with the three grades of apprentice, journeyman, and master, virtually those of ancient craft Masonry, at the same time requiring, as did the

latter, that crafts may be conducted only by certified masters whose work is irreproachable. Meanwhile, some German Masons are attempting to carry on by organizing in Palestine "The Symbolic Grand Lodge of Germany in Exile," making a special effort to meet the needs of exiled German Masons there. It is composed of two lodges in Jerusalem (one working in Hebrew), a third in Tel Aviv and another, working in Hungarian and previously under the Grand Lodge of Hungary.

Ireland. During the riots following the "Orange Day" disturbances in Northern Ireland, a Masonic Hall was destroyed in the Free State.

Netherlands. The Grand Master of Masons formally demanded the criminal prosecution of the periodical, *De Residentiede*, for publishing an article on "Masonry in the Baltic States," which charged, *inter alia*, that "the mysterious crimes of recent years plainly show what immense influence Freemasonry exercises over the world."

Portugal. The national assembly voted unanimously to require all government and corporate officers to disclose and surrender membership in any secret society, under penalty of losing their positions. As a consequence, Masonic activities in Portugal have been officially suspended and foreign correspondents are requested to avoid all references to the order and to send no Masonic publications into the country.

Spain. The International Masonic Association's *Bulletin* states that "of the 3000 prisoners captured by the regular troops (in the recent revolution) not more than a dozen were Masons." The commander of the government forces in Asturias, where much severe fighting occurred, was an active Mason and many of the craft fought against the Catalan revolutionists. But, continues the *Bulletin*, "The reactionary press persists in its campaign of slander, clamoring for the suppression of the lodges. Not satisfied with saddling our institution with blame for the insurrection, it now denounces us as responsible for King Alexander's death, though he himself was an active Mason."

Meanwhile, the Spanish Supreme Council, through its *Bulletin Oficial*, admonishes its adherents "to permit no discussion of any subject in the temples which relates, directly or indirectly, to party politics."

Switzerland. Maj. Ernst Leonhardt, "Der Führer" of Swiss Nazis, was convicted in the Basel Criminal Court and fined (with alternative imprisonment) for libeling Freemasonry. As evidence of its "criminal activity," he declared in his defence that "Masons founded the League of Nations." Initiative petitions for a law to suppress Masonry (1934 YEAR BOOK, p. 618) purported to contain 56,946 signatures, but an investigation showed that 15 per cent or more were fraudulent, having been obtained by paid solicitors who received the equivalent of from 6 to 12 cents for each signature. The Federal Council, to which the matter was referred, ordered all petitions returned to their respective communities for verification.

Turkey. Following announcement in the London *Freemasons' Chronicle* that the government contemplated suppressing all societies whose headquarters are located abroad, a decree was issued on October 12, abolishing Freemasonry in Turkey.

Intercraft Relations. With a movement of such widespread proportions menacing the very existence of Masonry, it would seem to be a poor time for internal dissensions among the craft itself, especially over trivial questions of alleged etiquette, such as the controversy (1934 YEAR BOOK, p. 250)

initiated by the Massachusetts Grand Lodge over Philippine lodges in China, has now come to be regarded; for no one pretends that any Masonic right or law was infringed by the latter. Fortunately, however, the former has received practically no support, outside of its own jurisdiction, from American Masonry. The latter's native sense of fair play has led inevitably to but one conclusion wherever the facts have become fully known. A typical attitude was that of the Mother Supreme Council of the Scottish Rite whose Grand Commander, in his allocution, delivered before that body at its biennial session in Washington on October 21, noted that "no other Grand Lodge in the United States had severed its relations with the Philippine Grand Lodge," and added:

The Grand Lodge of Scotland notified the members of La Perla del Oriente lodge (which continues in the Philippines despite the fact that they are not "open territory") that they were barred from visiting any lodges under the Philippine Grand Lodge, which thereupon issued a notice that it would be glad to welcome all visitors from lodges which had suspended relations of amity with it. This calls to mind the lines of Brother Edwin Markham:

"He drew a circle that shut me out
Heretic, rebel, a thing to flout.

But Love and I had the wit to win
We drew a circle that took him in."

I instructed our Deputies in both the Philippines and China that we deplored very much the situation, but, as far as the Scottish Rite was concerned, it would accept petitions . . . from members of the lodges under any of those jurisdictions

The attitude of other American grand bodies has been expressed by their representatives as follows:

District of Columbia. The Grand Lodge reviewer finds "the correspondence covering the situation exceedingly interesting and indicates that the Philippine Grand Lodge was acting entirely within its rights."

Georgia. The Grand Master, proceeding upon information later conceded to be inadequate, issued a decree on June 1, 1934, suspending fraternal relations with the Philippine Grand Lodge; but in October, following, the decree was rescinded and that action was approved by the Georgia Grand Lodge.

Minnesota. To the "foreign correspondent" the Philippine "Grand Master's report . . . seems to indicate that the Philippine Grand Lodge is Masonically right in its action as to entering China for the purpose of constituting lodges."

Texas. "Certainly our Philippine brethren were well within their legal rights in the matter of establishing lodges in the open or free territory of China and, for aught we know, acted wisely and judiciously," is the reviewer's conclusion.

Utah. The Grand Secretary, after a full review of the situation, sees in the action taken by the Massachusetts Grand Lodge, "a suggestion of coercion of the weaker by the stronger."

Virginia. To the Grand Secretary, "the conclusion to be drawn from the anxiety of the four oldest Grand Lodges, would seem to be that, with the only Grand Lodge in Asia taking the same course they have taken, (it) may in a few years bring about the formation of the Grand Lodge of China" and thus end further extension there by other Grand Lodges.

Wyoming. The Grand Secretary, who submitted the report on fraternal correspondence, could "not see any reason for the action taken, as . . . in Shanghai there are Masonic lodges working under six different grand jurisdictions."

In South Australia, where there are 154 lodges with 13,842 members, the Committee of Jurisprudence said

the action of the (Philippine) Grand Master, in every particular, was in accordance with Masonic law, custom and usage and . . . that the action of (the four oldest) Grand Lodges, in suspending relations with that of the Philippines, was the result of misinformation, etc.

Finally, from China itself comes an admission that all is not well with subordinate bodies of "the four oldest Grand Lodges." The Scottish District Grand Master writes to his Grand Lodge at Edinburgh:

We are all awaiting with great eagerness further developments in the matter. The cleavage is painful and deeply regretted.

Meanwhile, on March 9, the Philippine Grand Master, undaunted by the action of "the four oldest," granted a dispensation to 14 (mostly American and Canadian) Masons to form Szechuen Lodge at Chengtu, capital of China's westernmost province. Only one who knows the isolation of these foreign residents, over a month's journey from the coast, will understand how much it means to them to have in their midst a regular branch of a world-wide fraternity. That much, at least, the Philippine Grand Lodge has already accomplished. On October 26, the Philippine Grand Master (an American), after an official visit to China, granted a dispensation for West Lake Lodge at Hangchow in response to a petition signed by 28 Masons, many of whom were Americans. Thus the Philippine Grand Lodge had five subordinate bodies in China.

FRENCH ART. See ART EXHIBITIONS.

FRENCH CAMEROON. See CAMEROON, FRENCH.

FRENCH CONGO. See FRENCH EQUATORIAL AFRICA.

FRENCH EQUATORIAL AFRICA. A French colonial empire, comprising the colonies of Chad (398,955 sq. m.; pop. 1,095,717), Gabun (104,320 sq. m.; pop., 388,635), Middle Congo (172,411 sq. m.; pop., 662,713), Ubangi-Shari (236,363 sq. m.; pop., 1,176,564). Total area, 912,049 sq. miles; total population (1934), 3,323,629 (including 4661 Europeans) compared with 3,192,282 (1931 census). Chief towns: Brazzaville, the capital, 4000 inhabitants; Fort Lamy, 6000; Libreville, 4500; Bangui, 13,500; Port Gentil; Pointe-Noire.

Production and Trade. Wild rubber, coffee, cacao, cotton, palm oil, and ivory were the main products. Copper, zinc, and lead exist. Large numbers of cattle, sheep, asses, camels, horses, and ostriches were raised in the Chad colony. In 1933, imports were valued at 177,757,132 francs; exports, 141,005,775 francs (franc averaged \$0.0501 for 1933).

Government. The general budget for 1934 was balanced at 98,443,000 francs. Local budgets (in 1000 francs) of the colonies were balanced as follows: Chad, 16,342; Gabun, 19,200; Middle Congo, 21,161; Ubangi-Shari, 15,600 (franc averaged \$0.0657 for 1934). French Equatorial Africa, by a decree of June 30, 1934, was consolidated into one administrative unit under a governor-general assisted by an administrative council and a secretary-general. Governor-General, M. Silvestre who was appointed during 1935 to succeed Edouard Renard, killed in an aeroplane accident near Bologo, Belgian Congo, in March, 1935.

FRENCH GUIANA (gē-a'na) AND IN-INI. A French colony in South America. Area, 34,740 sq. miles; population (1931 census), 22,169. Cayenne, the capital, had 10,744 inhabitants in 1931; the other 14 communes had a total of 11,425 persons exclusive of the penal settlement of Maroni, the floating population of miners without fixed residence, and officials, troops, and native tribes. The chief ports were Cayenne, St. Laurent-du-Maroni, and Oyapoc.

Production and Trade. Rice, maize, manioc, cacao, coffee, and sugar cane were the main crops. The forests were rich in timber and commercial gums. Gold mining (placer) was the main industry. In 1933, imports were valued at 36,946,042 francs; exports, 24,274,703 francs (franc averaged \$0.0501 for 1933).

Government. The budget for 1932 was bal-

anced at 16,578,950 francs. A governor administers the colony aided by a privy council, and a council-general elected by the French residents of the colony. During 1933 French Guiana was divided into two independent divisions—the coastal division remained French Guiana and the interior was named Territory of Inini. Governor, M. L. J. Bouge.

FRENCH GUINEA. See FRENCH WEST AFRICA.

FRENCH INDIA. The colonies of France in India, consisting of Chandernagor, Karikal, Mahé, Pondichéry, and Yanaon. Total area, 198 sq. miles; population (1933), 281,684. Pondichéry (capital), had 46,535 inhabitants (1933). In 1932 the 62 primary schools and 5 colleges, all supported by the government, had 12,099 students.

Production and Trade. Groundnuts, manioc, and rice were the main crops. Livestock in the colonies (Jan. 1, 1934): 66,710 cattle, 27,225 sheep, and 33,745 goats. In 1933, at the ports of Pondichéry and Karikal, imports were valued at 108,615,000 francs; exports, 127,418,000 francs (franc averaged \$0.0501 for 1933).

Government. The local budget for 1933 showed revenue of Rs3,049,585 and expenditure of Rs2,763,199 (rupee averaged \$0.2489 gold for 1933). The colonies were administered by a governor (nominated by the President of France) aided by an executive council of 5 members and an elective general council of 28 members. French India was represented in the French Parliament by 1 senator and 1 deputy.

FRENCH INDO-CHINA. A French dependency comprising the divisions shown in the accompanying table.

<i>Division</i>	<i>Sq. m.</i>	<i>Pop. (1931)</i>	<i>Capital</i>
Annam *	56,974	5,122,000	Huế
Cambodia *	69,866	2,806,000	Pnom-Penh
Cochin China *	25,274	4,484,000	Saigon
Kwangchow *	328	200,000	Fort Bayard
Laos *	89,320	944,000	Vientiane
Tongking *	44,660	8,096,000	Hanoi
French Indo-China ..	286,422	21,652,000	Hanoi ^d

* Protectorate. * Colony. * Leased from China in 1899 and placed under the authority of the Governor-General of French Indo-China. ^d The capital city was Hanoi, but during certain seasons of the year, when climatic conditions are oppressive, the government offices remove to Saigon.

Chief towns with 1931 populations in parentheses: Cholon (134,000), Hanoi, the capital (124,000), Huế (123,000), Saigon (122,000), Pnom-Penh (96,000), Binh-Dinh (74,000), Battambang (22,000), Vientiane (10,000), Fort Bayard (9000). In 1933 there were (for native children) 8314 elementary schools with 390,000 pupils, 23 high schools with 4209 pupils.

Production and Trade. Rice (3,042,633 metric tons for 1934-35), rubber (20,719 metric tons exported in 1934), pepper (2800 metric tons in 1935), maize (250,000 metric tons in 1935), coal (1,592,000 metric tons in 1934), tin, zinc, fish, tea, and hides were the main products. In 1934, imports were valued at 909,181,000 francs, the main items were cotton and silk tissues, machinery, kerosene, and mineral products; exports, 1,044,106,000 francs (franc averaged \$0.0657 for 1934). France supplied 60 per cent of the imports.

Communications. There were 2982 kilometers of railway line in operation during 1935. A new railway to link up the northern system with the southern system was under construction during 1935. In Saigon an automatic telephone exchange, with a capacity of 2000 subscribers in Saigon and

1000 in Cholon, was placed in service late in 1935.

Finance. The general budget of French Indo-China for 1935 calls for ordinary expenditure of 559,162,100 francs chargeable to current revenue and 210,496,810 francs public works against loan funds. For 1934, revenue and expenditure in the general budget were balanced at 609,540,000 francs. The public debt amounted to 2,003,400,000 francs on July 1, 1935 (franc averaged \$0.0661 for June, 1935). The local budgets were balanced as follows (in 1000 francs): Annam (1934), 88,082; Cambodia (1933), 79,420; Cochin China (1933), 132,291; Kwangchow (1934), 4648; Laos (1934), 34,045; Tongking (1934), 111,150.

Government. French Indo-China was administered by a governor-general aided by a secretary-general, a government council, and a grand council for economic affairs. Each of the protectorates was headed by a French resident-superior and Cochin China (a colony) was under a governor. Governor-General in 1935, René Robin.

History. On July 22, 1935 the commercial agreement of May 16, 1930, and the supplementary agreement of May 4, 1935, governing trade between China and French Indo-China, were made effective by China and France.

Discontent was caused among civil servants by the decrees issued during June, July, and August of 1935 which reduced the salaries of all government employees by 10 per cent and discontinued allowances on exchange fluctuations.

FRENCH IVORY COAST. See FRENCH WEST AFRICA.

FRENCH LITERATURE. The year was marked by two outstanding commemorations: The French Academy celebrated the 300th anniversary of its foundation by Richelieu with elaborate ceremonies, a remarkable exhibit in the Bibliothèque Nationale, and a volume of over 500 pages, *Trois siècles de l'Académie Française*, par les Quarante (Didot); moreover the Academicians succeeded in completing the 8th edition of their famous *Dictionnaire*.

In Paris, in the provinces, in every locality where he had spent even a few days, Victor Hugo, who died fifty years ago, was remembered. But there were other literary celebrations: In Provence, near Arles, at Fontvieille, festivities signaled the inauguration of a museum in the *Moulin* of Daudet. In connection with the "Fêtes de Paris," a very elaborate representation of Greban and Michel's celebrated *Mystère de la Passion* (1452) was given in June on the large "parvis" of Notre Dame. The death of Henri Barbusse (q.v.), who died in Moscow from croupous pneumonia, and who had been the fiery advocate of the cause in France was an occasion seized by the Soviet Government to make a great demonstration. The death of Alfred Vallette, the founder and editor of the *Mercur* de France, and the stepping of Duhamel, almost on the same day, into the editorial room of the famous review, and in the French Academy were among the outstanding events of the year and these were followed by the announcement that the Frères Tharaud (Jérôme and Jean) were to dissolve their literary partnership.

During 1935 the French Academy refused to elect Paul Claudel. (For an account of the elections see the article ACADEMY, FRENCH.) The members who died during the year were G. Lenôtre, Jules Cambon, and Paul Bourget. Among others deceased there may be named Dr. Armaingaud, Antoine Thomas, Panaït Istrati, and René Crevel (suicide). Madame Colette was elected to

replace the Comtesse de Noailles in the Académie Belge de Langue et de Littérature. Early in June there was held in Paris a Congrès International d'Écrivains that lasted five days during which were heard such men as Barbusse, Gide, Mann, Benda, whose chief topic of discussion was whether or not Communist writers still belonged to literature.

The chief literary prizes of the year were awarded as follows: Grand Prix de Littérature (French Academy) to André (not George) Suarès—a few days before the same Suarès had received the Prix de la Société des Gens de Lettres; Grand Prix du roman (Academy), Albert Touchard, for *La Guêpe*; Prix Goncourt, Joseph Peyre for *Sang et Lumière*; Prix Femina, Claude Clive, for *Bénédiction*; Prix Paul Flat, Bernard Narbonne, for *A la Gasconne*; Prix Populiste, Henri Troyat, for *Faux Jour*; Prix de la Renaissance, Fernand Fleuret, for *Au Temps du Bien-Aimé*; Prix Gringoire, Marcel Griaule, for *Les Flambeurs d'hommes*; Prix Renaudot, François de Roux, for *Jours sans gloire*; Prix de la Critique, Thierry-Maulnier, for *Racine*; Prix de Littérature Coloniale, Oswald Duran, for *Terre Noire*. See also under Poetry and Theatre, below.

Literary History. Scholars were so prolific in production during the year 1935 that it is indeed difficult to select from a mass production of so high a standing. Medieval: The publication by Droz of the *Recueil de Freppel* (short plays mostly unknown); Ernest Hoepfner, *Les Lois de Marie de France*, and the transliteration into modern French, by Professor Cohen, of Adam le Bossu's *Jeu de Robin et de Marion*. Of work associated with or relating to the 16th century may be cited: G. Atkinson's *Nouveaux Horizons de la Renaissance*; Pierre Villey, *Montaigne devant la Postérité*; Plattard, *État présent des Etudes sur Montaigne*; Imbart de la Tour, *Calvin, l'Institution chrétienne*, and the very erudite edition of Calvin's *Institution* by Jean Panier (1935 marking the 4th centenary of that epoch-making work). Of work that concerned the 17th century, Mabile de Poncheville's *Valentin Conrart, le Père de l'Académie* (in connection with the tercentenary of the French Academy) and the not very revealing *Vie secrète de l'Académie*, by Peter must be noted. Racine inspired two books: Thierry Maulnier, *Racine* (which was awarded the Grand Prix de la Critique), and J. Lichtenstein, *Racine, poète biblique*. The Abbé Langlois published a voluminous *Correspondence de Mme. de Maintenon* (who is said to have written about 60,000 letters); Mlle. F. L. Wickelgren gave us *La Mothe Le Vayer, sa vie, ses œuvres*, and Paul Hazard, a capital work in *La Crise de la Conscience Européenne* (3 vols.)—crisis placed in the years 1680-1715, still during the reign of Louis XIV. Of the 18th century: H. Bordeaux wrote the life of the famous *Mariana, la Religieuse Portugaise*; André Maurois, published a *Voltaire* embracing a large subject in a comparatively very small book; the ninth volume of the posthumous Faguet, *Histoire de la poésie Française* came out, covering the late part of the century; G. Chinard, gave a very interesting edition of Diderot's *Supplément au Voyage de Bougainville*, while M. Torrey contributed a thorough study of the relations between "Diderot and Voltaire" (in *Publications of the Modern Language Association*; December, 1935, New York).

Concerning the 19th century the output of scholarly works was large: Albert Cahuet, *Lucile de Chateaubriand, un Werther féminin*; G. Rudler, *Adolphe* (Coll. Grands événements litt.) discusses

the Staëliens and the Lindsayens, i.e. whether the woman in the book is Mme. de Staël or Mme. Lindsay; two books on *Stendhal*, one by Alain, one more documentary by P. Jourda, *Stendhal, l'Homme, l'œuvre*; Balzac's, *Correspondance avec Mme. Zulma* (edited by Bouteron); G. Ascoli, *Réponse à quelques détracteurs de V. Hugo* (opening address of his lectures at the Sorbonne); G. Brunet, *Victor Hugo* (in the excellent collection, *Maîtres de la litt.*); P. Berret, *La Légende des Siècles* (Coll. "Chefs d'Œuvres"); J. Hamelin, *V. Hugo avocat*; H. G. Hunt, *Le Socialisme et le Romanisme, La Presse de 1830-1848*; V. Giraud, *Vie secrète de Sainte-Beuve*; and the publication of the most important *Correspondance de Sainte-Beuve* by Bonnerot; Jean Davray, *George Sand et ses amants*; Gérard-Bailly, *Les Véhémences de Louise Collet*; Abbé Grillet, *Le Diable dans la littérature au 19^{me} siècle*; J. Pommier, *La mystique de Baudelaire* (very well documented); Mme. Paul Verlaine, *Mémoires de ma vie*; Camille Mauclair, *Mallarmé chez lui*; Helen Trudjean, *Esthétique de Huysmans* (heavily loaded with documents); St. Fumet, *La Mission de Léon Bloy*; G. Ferrière, *Jehan Rictus, son Œuvre*; Raymond Lefevre, *La Vie inquiète de Loti* (Malfère); Proust's *Correspondance*, vol. 5; J. Cusenier, *Jules Romains et l'Unanimité*; Ch. Braibant, *Du Boulangisme au Panama, Le Secret d'A. France*; H. Dérioux, *La Poésie française contemporaine, 1885-1935*; Jean de Latour, *Examen de Valéry* (said to have satisfied Valéry); Octave Aubert, *Louis Barthou*.

Two more volumes have appeared of Brunot's magnificent *Histoire de la Langue Française*, both concerning the 18th century: *L'Universalité en Europe* and *Le Français hors de France*. Much praise has been given also to G. and R. Lebidois, *Syntaxe du Français moderne* (2 vols. Picard).

Novels. During the year 1935 the novel was produced abundantly. Mauriac in *La Fin de la Nuit* takes up again the lamentable story of Thérèse Desqueyrou; after a series of intrigues, even directed against her own daughter from whom she tries to wrest a lover, she finally sees the light . . . in religion. Not more cheerful are the two new volumes of Jacques de Lacretelle's *Les Hauts Ponts*, the story of a woman who determines to buy back the family estate at any cost; she succeeds and turns it over to her son; but he proves unworthy of the trust, so that finally the whole life of the woman has been wasted, all the money obtained, gotten mostly by intrigues, has been to her "monnaie de plomb" (vol. iii, *Années d'Espérances*, iv. *Monnaie de Plomb*). Duhamel gives vol. iv of his *Chronique des Paquiers*: "La Nuit de Saint Jean." Behaine reaches the tenth volume of his *Histoire d'une Société*: "Les Signes du Ciel." Jules Romains continued to command interest with two more volumes of his *Hommes de Bonne Volonté*: ix, "Montée des périls," x, "Les Pouvoirs" (War is imminent, and J. R. suggests what might have been done previous to 1914, while telling what actually did take place).

Among the authors whose fame is well established, who have contributed novels, may be mentioned: Henri de Régnier, *Moi, elle et lui*; E. Jauloux, *Le dernier jour de la Création* (as artists imagine those last days and as they try to express them in their art); Henri Deberly, *La maison des trois veuves* (they have a nephew who drives them to despair); G. Bernanos, *Un Crime* (very exciting and extraordinary story of a woman who commits a crime and for a while succeeds in having herself taken for a priest); Jean Fayard, *La Chasse aux Rêves* (a young man from the lower stratum

of society comes near ascending socially; fails, and then revolts); and the original Jean Giono, *Que ma joie demeure* (in which a poet tries to offer happiness to the village and finally has to go away with his hopes dispelled).

Problem novels were numerous: J. H. Rosny, *Marcelle éblouie* (love of girls for older men); Henri Troyat's *Faux Jour* caused much discussion (the disillusionment of a boy for his father); Marcel Prévost had one of his keen psychological studies in *Clarisse et sa fille*, a mother who acts as if she were jealous of her own daughter, but (like in *Ebronie*, 1934) the analysis is so subtle that one hardly knows what the author himself thinks of the case); Pierre Valdagne, in *Mélanie Cocherot* followed the case of a fine girl who, by mere inertia, and having the occasion to do so, generally lets herself become the slave of an easy, lazy, and none too honest life. The relation of parents and children in modern surroundings were studied in Robert de Traz's *Le Pouvoir des Faibles*. E. Bove in *Le Pressentiment* told the story of a man who suddenly acts strangely, leaves his family and friends; but was prompted by an indistinct feeling of sudden death that threatened him. Bertrand de la Salle puzzled the public when, in his *La Pierre philosophale*, he treated a group of three young men who, following the war, sought anchor for their destinies and found nothing but doubt and fear.

Opposed to an attitude of mere expectation is that of several authors who shared the conviction that the world is on the eve of revolution, although attempts at actual revolt are doomed for the present by the powers that are: André Malraux, whose descriptions of communistic upheavals in China are so well known, turned his attention to Hitler in Germany in *Le Temps du Mépris* (shocking story of might, yet of brutal force); Paul Nizan in his *Le Cheval de Troie*, shows how a professor in a Lycée of the south of France smuggled revolutionary ideas into the locality, just as the Greeks smuggled warriors into Troy. Ramon Fernandez, another author of rather recent fame, in *Les Violents*, shows a woman who favors the communistic workers employed by her husband.

Here one may refer to a rather long and dreary list of novels by very able writers, all of whom sounded a pessimistic note; indeed, from such a source one can but draw dark conclusions regarding the state of mind that prevailed in Europe during the past year. A. Roubé-Janski gave us *Écume*; Georges David, *Passage à niveau* (about the hopeless destitution in poorer classes); Yves Gandon, *La Belle inutile*; Mme. Simone, *Jours de Colère* (family drama). M. Guilloux's *Sang noir* betrays a particularly harsh yet pathetic attitude toward one unable to adjust himself to conditions and who finally commits suicide. Quite as depressing is Luc Diétrich's *Le Bonheur des Tristes* (which seems written by a disciple of Céline, author of *Voyage au bout de la Nuit*); again horrors were featured by Pierre Audiat, in his *La Porte du Fond*, that reminded one of Dostoevski and suggested, as one critic says, "La rédemption par le bas, la recherche de la lumière dans les ténèbres"; Jacques Debrü-Bridel, in *Jeunes Ménages*, tells the story of a sort of Poil de Carotte. To that class belong novels of the school called "Populiste"; E. Dabit, his most productive representative, offered *La Zone verte*, in which the sordid conditions, preferably described by these writers, are shown to exist in a suburb of Paris. Marcel Aymé, *Maison Basse*, tells in his crude manner a love story of a mother which brings about the death of her daughter. Francis Carco

adds two volumes to his series of gloomy tales: *Ténèbres* (a novel that reminds much of his famous *Homme traqué*), and *Brûmes*. Pierre Hamp, in *Glück auf!*, takes the reader among the miners of the Saar.

Novels of country life: M. Genevoix, *Marcheloup*; C. Silvestre, *La roue tourne*; and, specially praised, Léon Boquet, *Heurtebise*. Raoul Stephan's *Becgrun* is a sort of epos of the vineyard.

Novels of which the *mise en scène* is Spain: First of all, the Prix Goncourt for 1935: Joseph Peyre, *Sang et Lumière*, torero story, Marilena, being the fatal woman, cannot help reminding one of Carmen; R. Escholier, *Maripépa*, very passionate and somewhat sensual. A. Machou's *Trésor en Espagne* is a very entertaining account of a modern traveler.

Other exotic novels are: R. Bourget-Pailleron, *Cœur de Russie*; Constantin-Weyer, *Une corde sur l'abîme*. With scenes placed in Africa, Luc Durtain, *Yagouta aux Cavaliers* (Tunisia), a man victim of a Carmen; Jean d'Esme, *Fidèles*, adventure among primitives; André Demaison, *Le Jugement des Ténèbres*, white men disturbed by a tribunal of natives; A. Truphemus, *Ferhat, instituteur indigène*, the problem of adapting white people to Algeria; the very striking *Flambeurs d'hommes*, by M. Griaule; *Le Lépreux*, by H. de Monfreid (the last two in Abyssinia).

Sea novels include: E. Peisson, *Passage de la Ligne*, and *Chalutier 304*; R. Verce (Prix Goncourt, 1934) *Remorques*. Two war novels: Jean-Paul Vaillant, *L'Enfant jeté aux bêtes*, a bitter story of suffering and hardships, moral even more than physical, in the army; Michel Missofe, *La Confession d'un Combattant*—on the same note. A double spy story, *La Guêpe*, by Albert Touchard was awarded the Prix du Roman by the French Academy in June.

Novels by women: Rachilde came to the front once more with *La Femme-Dieu*, and kept to her psychology of hysteria; Princesse Bibesco contributed two tales with very different settings, one oriental, *Le Rire de la Naiade* (romanesque and "recherché") and *Egalité*, a lady of high birth and man with communistic ideas meet (a theme now somewhat obsolete); André Corthis (author of *Pour moi seule*), *Le merveilleux Retour*, a provincial setting, feminine psychology; Colette Yver, *Les deux Cahiers de Pauline*; Marie LeFranc, *La Rivière solitaire*; Germaine Beaumont, *Perceneige*. The Prix Femina for the year went to Claude Silve, for *Bénédiction*, a story with setting in an old castle and with some characters who belong rather to the domain of dreamland than to that of reality; it even includes a scene of incantation by a witch. A story that one would hardly expect to be told by a woman is Thérèse Herpin's *Yoloch, le Maléfique*, which deals with the life of the convicts in French Guiana.

Among the successful novels of a light, merry, or sportive character were: *L'Alouette aux Nuages*, by Maurice Bedel (it is the lark of Saint-Germain des Prés which philosophizes in her own way); *La Dame de Malacca*, by Francis Croisset, tells of the amusing situations arising out of the love of an Irish girl for an Asiatic. Louis Latzarus, *Une Femme entra et Le Vivier*, by H. Troyat, received a hearty welcome from the press, as did *Grelu*, by Léopold Chauveau. The admirers of Jacques Rivière issued his posthumous *Florence* which seems to be also autobiographical.

A much acclaimed movement was that of the "Renaissance de la nouvelle" (as if the short story

in France needed resurrection!), and a new collection was started under the direction of Paul Morand (Nouvelle Revue Française, publishers). Several of the following titles belong to that series: Pierre Mille, *L'Homme qui ne savait rien* (all stories deal with Russia); A. de Chateaubriant, *La Meute* (much discussed, 3 récits and 3 contes); E. Jaloux, *Trois nouvelles*; H. Duvernois, *La maison*; Pierre Bost, *Un grand Personnage*; Jacques Boulenger, *Contes de ma Cuisine*; Claude Farrère, *Le Quadrille du Mur de la Chine*; Joseph Peyre, *Coups durs*; Jean Cassou, *De l'Etoile au Jardin des Plantes*; J. H. Rosny, *La Vampire de Bethnal Green* (the occult world); P. Dominique, *Une Bouche au Palais* (political); Jean Tousseul, *Le Masque de Tulle*; Marguerite Yourcenac, *La Mort conduit l'Attelage* (medieval and gloomy); Irène Nemirowski, *Films parlés*.

Poetry. Judging by the year's crop of poems poetry is certainly not dying in France. Francis Jammes's *De tous temps à jamais* has been called "le plus franciscain de ses livres," and yet one finds pagan notes as well as Christian ones, that recall Theocritus, LaFontaine, and Virgil. The same may be said of Mario Meunier who, in his *Hymnes philosophiques* exalts philosophical themes as they are associated with such great names as Aristotle, Jesus, Marcus Aurelius, Cleanthes, Julian the Apostate, etc. Robert Guy d'Helle wrote an allegorical poem, *La Geste du Vase de Soissons*, while Marcel Diamant-Berger resuscitated in *Thulé, la vraie Thulé*, the gods of the mythology of the North. Luc Durtain, in his *Quatre Continents* offered, in choppy style, reminiscences of his endless travels. Verse of very high class was provided by the poems, in traditional style, of Henry Derieux, *Face à face* (awarded the Prix Léon Dièrx); Amélie Murat (Prix Moréas in 1930), *Le Chant de la vie*; Ernest Chavost, *L'Hosanna des quatre Saisons*; Phil. Chabeneix (author of *La Couronne d'Ophélie*), *Comme le feu, 24 sonnets élégiaques*; Cl. Chardon, *Trois Roses Dauphiné*; Jean Deschieux (a Belgian), *Rythmes*; Robert Honnert, *Lucifer*; André Berry, *Corbeille de Gislaine* (pretty verses for a betrothed girl); G. Audisio, *Bucelle* (songs of an everlasting traveler who never finds joy and always regrets what he has left); Tristan Derème, *Le Violon des Muses*. The cheerful note was struck by Raoul Raynaud, *Du Sourire à Don Juan* (first and last titles), and Georges Fourest (called "le virtuose de la cocasserie"), *Geranium ovipare*.

Religious poetry was represented chiefly by the Abbé François Ducaud-Bourget's moving *Oblation*; also by Camille Belloy (a Belgian), *Le Chemin de la Croix*. Anti-religious: *L'Enfer*, by Patrice de la Tour du Pin; Marius Scalesi, *Poèmes d'un Mandat*.

Quite a group of poets still hold that poetry, to deserve the name, must be cryptic; among these: Pierre Gueguen, *La Chasse du Faon* (symbolistic in idea as well as in language); Julien Gonzague Frick, *Ingrès* (the author is a friend and was a follower of Apollinaire, and how! "Isorrhopastique," "Cybistique," and "Telesme" are the titles of some poems, and he calls himself "lunulant"); and Gisele Frassinis, *La Sauterelle arthritique* with a foreword by Eluard. Somewhat interesting was the attempt of Claudion Bauquier, in *Bou-Guerre et autres poèmes sur parfums violents et les violences du temps*, to evoke the Orient and Africa with imitative rhythms and cadences borrowed from primitive tribes. François Drujon, in *Mysthístoria*, in his clever irony reminds one of the late Laforgue,

Emile Langlade takes us into *Le Monde des Chats*. Mme. Thérèse Aubray in *Je viens en fraude* betrays a kind of sensuality which might cause us to imagine her jealous of the laurels of Mme. de Noailles.

Poetry was discussed in several books: Tristan Tzara, the former leader of the Dadaists, *Grains et issues, essais poétiques*; Jean Cassou, *Pour la poésie*; and, more original, Jean Royère, *Le point de vue de Sirius*, which makes connection with the discussion on "la poésie pure." Henri Dérioux, who won the Prix Dierx, was publishing *Poésie Française contemporaine, 1885-1935*. The Prix Jean Moréas went to Fernand Dauphin for his collective works, the Prix Edgar Poe to Charles Corm, and the great (15,000 fr.) Prix Petitdidier to Fr. Bernouard for his four little volumes.

Theatre. The year began under such gloomy auspices that one of the most successful playwrights, H. Lenormand, announced the doom of the stage. Of the early productions *Crépuscule* (Daxen) pictures a poor author whose play is shamefully altered by an impresario who has no other aim but to please the public and to star an actress. A little later, Fr. Porché directed a violent and specific attack, "Orage sur la Comédie Française," (*Revue de Paris*, June 1). Perhaps the first plays of the year warranted pessimism: Salacrou's *Les Frénétiques* (3 acts) was not particularly successful in its picture of the world of the cinema; Jacques Deval's *L'Age de Juliette*—two young lovers who despair of life want to leave the world and finally are rescued from a suicide pact; and *Marie Galante*—a courtesan who has a longing for her little village, were not acclaimed as masterpieces; Jacques Chabanne's *Vel d'hiv* (Vélodrome d'Hiver) offered a mixture of sentimentality and realism in a picture of a champion cyclist accepted as a lover by a puritanic bourgeoisie; Jean Arnouille's *Y avait un prisonnier* did not convince by its presentation of an unscrupulous financier who after spending 15 years in prison returns to find his family have developed the same inclination for fraud, and he now preaches them ethics. Less severely criticized were: *Rouge*, by H. Duvernois, a story of a young preceptor who pretends to be a communist, converts a young girl and is sorry for it—finally the situation is cleared up and marriage ensues; Maurice Rostand's *Le Procès d'Oscar Wilde* (presented as a piece of shameful hypocrisy); Boutet et Aragny's *Aliette* (theme of Maupassant's *Yvette*, a girl ashamed of her mother's "profession"); Jean-Albert's *Hôtel de masques* (a man mistaken for a contemptible fellow by his wife and for a hero by his mistress, and later the order is reversed); P. A. Breal, *Trois camarades* (Three Chums); Verneuil, *Trouble* (edging on Freudism). Judged unequivocal failures were *Une jeune fille à rêvé*, by La Gouiriade (unnecessarily "brutal") and *Girouette*, by R. Benjamin, a satire of military and political life.

The most successful plays were historical; early in the year François Porché scored with *Un roi, deux dames et un valet*, picturing the deadly rivalry between Mme. de Montespan and Mme. de Maintenon; then Jean Sarment, with *Madame Quinze*, meaning Mme. de Pompadour; then Albert Jean with *Gille de Rais*, a vindication of Bluebeard who is presented as a "cavalier" servant of Joan of Arc and has really no other aim except to make his subjects happy; finally, two great successes of the end of the year: Young André Jossot's *Elizabeth, la femme sans homme*, the English queen, torn between her fondness for Essex and her instinctive repulsion for love, following a fearful experience,

when a girl, at the hand of a male servant; and Edouard Bourdet's *Margot, comédie historique*, about the vivacious and light-hearted wife of Henry IV, authoress of the *Heptameron*—Marguerite de Valois et de Navarre. Another, a play of fancy, by Giraudoux, *La Guerre de Troie n'aura pas lieu*.

A play that deserved better than fate decreed was Maeterlinck's *Princesse Isabelle*, a combination of a fairy tale and actual dream of a "petite bijoutière" who believes herself loved by a prince—this is the old Maeterlinck of the days of *Pelléas et Mélisande*. Stève Passeur had public opinion divided on the merits of his *Je vivrai un grand amour* (played by the Pitoeffs), the story of a girl who sees her lover taken away from her by an adventurer; the man soon realizes his blindness and wants to come back; but she prefers to remain with her illusion of the great love and sends him away.

In the field of comedy, Sacha Guitry gave successfully *La fin du monde*, but less so *Quand nous jouons la comédie* (in which he succeeds in fooling the audience to the last minute, not knowing whether they witness a real play or a play in a play). The great humorous success was Jean de Letraz's *Bichon* (acted by V. Boucher) at the Michodière. The Palais Royal gave *La Dame de Vitte*, by Roger-Ferdinand et G. Dolley. In the same vein were Paul Nivoix's *La mariée éprouvée*; Beer et Verneuil's *Les Fontaines lumineuses* (a satire on women who are only the reflection of what men make them), and Yvan Noé's *La Femme qui se met en quatre*.

As in recent years, one may almost say that more revivals were successful than new plays. Among the revivals were several Hugo plays (in commemoration of the fiftieth anniversary of the author's death) and Dumas' *Henri III et sa cour*. Then, *Le Courrier de Lyon*, old melodrama by Moreau, Siraudin, and Delacour; *Les Amants* by Donnay; *Terres inhumaines* by Curel; *Madame Sans-Gêne* by Sardou; *Le Petit Café* by Tristan Bernard; *Les Oiseaux*, the new Zimmer version of the Aristophanes play given two years ago by Dullin.

Plays from other countries: Shakespeare's *Rosaland*, given by Copeau; Calderon's *Médecin de son honneur* (adapted by Arnoux); Goldoni, *Valet de deux maîtres*; Bruckner, *La Créature*; and a play borrowed from Dickens, *Le Grillon du foyer*, arranged by Francmesnil, which was a great success at the Odéon.

The Prix Brieux was awarded to Paul Brach, author of *Règne D'adrienne* (1934).

Miscellaneous. Autobiographies continue to rain down on us: H. Lavedan, *Ecrire* (2d vol. of Memoirs); Cahiers of Maurice Barrès, vol. ix, years 1911-12; Cécile Sorel, the actress, *Souvenirs*; Henry Bordeaux, *Le pays sans ombre* (childhood); Abel Hermant, *Souvenirs de la vie mondaine* (introduced young in society by his family connections); R. Carco, *Mémoires d'une autre vie* (terrible if not exaggerated); Jean Cocteau, *Portraits-souvenirs*. Under this head one may place: Romain Rolland, *Quinze ans de combats, 1919-1934*; A. Gide, *Nouvelles Nourritures* (sequence to *Nourritures terrestres*, a sort of philosophical testament made out of scraps of diary and showing the author very near a return to Christian ideas via communism). Mme. Marie Scheikervitch, *Souvenirs des temps nouveaux*; A. Maurois, *Sentiment et coutumes*; Paul Morand, *Rond-Point des Champs Elysées* (his Chroniques in the *Figaro*). In contrast, Jean Lasserre, *Paris-misère* (descriptions of the slums of the "zone de Paris"); and César

Fauxbras, *Viande à brûler*, *Journal d'un chômeur* (very bitter).

Abel Hermant gave an allegorical-historical interpretation of the reign of Nero in *Poppée, l'amante de l'Anti-Christ*. A sort of saga of the triumphal days of Islamism was begun by Jean and Jérôme Tharaud: *Les 1001 Jours de l'Islam*, vol. i, "Cavaliers d'Allah" (to be followed by ii, "Les Grains de la Grenade," iii, "Le Rayon Vert," Funk). Brentano published two valuable books on *La Renaissance*, and *Luther*. Armand Praviel, *M. Vincent chez les Turcs (Saint Vincent de Paul)*. André Suarès (who won the Grand Prix de l'Académie) offers *Trois hommes, Pascal, Ibsen, Dostoïewski*. François Porché, *Portrait psychologique de Tolstoï*. A picture of French society in the first half of the 19th century is found in J. Berthaud, *Le Faubourg Saint-Germain*. Octave Aubry published one of his excellent works of history, *Saint-Hélène* (2 vols.); and Jean Rostand one of his stimulating studies which remind one of Michelet or Maeterlinck, *La vie des Libellules*. Finally, mention must be made of Julien Benda's *Délices d'Eleuthère*—i.e. delights in pure thought (the spirit of Renan or Gourmont).

FRENCH SOMALILAND. See SOMALILAND, FRENCH.

FRENCH SUDAN. See FRENCH WEST AFRICA.

FRENCH WEST AFRICA. A French colonial empire comprising the colonies shown in the accompanying table.

Colony	Sq. m.	Pop. (1931)	Capital
Dahomey	47,131	1,112,000	Porto Novo
Dakar *	61	53,982	Dakar
French Guinea	96,838	2,236,968	Conakry
French Sudan *	581,383	3,568,825	Bamako
Ivory Coast *	184,247	3,885,153	Abidjan
Mauritania	322,252	323,819	St. Louis *
Niger *	482,577	1,810,953	Niamey
Senegal	77,731	1,584,273	St. Louis
French West Africa .	1,792,220	14,575,973	Dakar

* Including Dependencies. * Upper Volta ceased to be a colony on Jan. 1, 1933, and its territory and population were divided among three other colonies as follows. French Sudan received 20,226 sq. miles and 713,167 inhabitants; Ivory Coast, 59,212 sq. miles and 2,018,837 inhabitants; Niger, 27,290 sq. miles and 268,239 inhabitants. * The lieutenant-governor of Mauritania resides in St. Louis in the colony of Senegal.

Chief towns: Dakar (capital), 42,000 inhabitants in 1931; Saint Louis, 30,000; Porto Novo, 27,000; Bamako, 25,129 (1932); Abidjan, 17,718; Ague, 20,009; Diourdel, 15,402; Abomé, 15,049; Rufisque, 14,623.

Production and Trade. The main products (in metric tons) were groundnuts (1933), 800,000; maize (1933), 511,500; palm and palm kernel oil (1934), 49,600; cotton (1933), 3900; cacao (1933), 31,087; tobacco; bananas; cabinet woods; coffee; and gum. Gold exported in 1934 amounted to 3078 kilograms. In 1933, imports were valued at 633,026,000 francs (textiles, fuel oil, mechanical implements, food substances, and beverages were the main items); exports, 498,950,000 francs (franc averaged \$0.0501 for 1933).

Communications. On Jan. 1, 1934, there were 2355 miles of railway in operation, 22,126 miles of telegraph, and 327 post offices. During 1933, 9910 ships aggregating 9,326,321 tons entered and cleared the ports.

Government. For 1934, the various budgets (in 1000 francs) were balanced as follows: general budget, 164,397; the aggregate of the local budgets, 390,433; supplementary budgets, 257,831 (franc

averaged \$0.0657 for 1934). A governor-general, aided by a council, governs the whole of French West Africa. Each colony was under the direct administration of a lieutenant-governor, and Dakar and Dependencies was under a governor of colonies, all subordinate to the governor-general who was relieved of the direct administration of any part of his government so that he could direct and control the common interest of all the colonies. Governor-general in 1935, M. J. Brévié (appointed in 1930).

FRIENDLY ISLANDS. See TONGA ISLANDS. **FRIENDS, RELIGIOUS SOCIETY OF.** A mystical religious sect which originated in England in the middle of the 17th century under the leadership of George Fox. For early history see THE NEW INTERNATIONAL YEAR BOOK for 1932 and THE NEW INTERNATIONAL ENCYCLOPEDIA, vol. ix, pp. 285 and 286.

Five Years' Meeting. In 1902 the largest body of the Religious Society of Friends, known as the Orthodox Group, organized the Five Years' Meeting. This organization meets as a delegate body every five years and in 1935 consisted of 12 Yearly Meetings, with a membership of approximately 78,000. Its headquarters are in Richmond, Ind. The work of the various departments, such as missions, peace, prohibition and public morals, religious education, is under the direction of executive committees and secretaries of boards. The Five Years' Meeting also maintains seven colleges for higher education: Earlham, in Richmond, Ind.; Wm. Penn. in Oskaloosa, Iowa; Guilford, in Guilford, N. C.; Wilmington, in Wilmington, Ohio; Whittier, in Whittier, Calif.; Nebraska Central, in Central City, Nebr.; and Friends University, in Wichita, Kans. Haverford College in Haverford, Pa., is maintained by the Philadelphia Yearly Meeting and Pacific College in Newberg, Ore., by the Oregon Yearly Meeting. The latter bodies, however, and the Ohio Yearly Meeting are not a part of the Five Years' Meeting. In 1935 the membership of the Oregon Yearly Meeting was 3187; of the Ohio Yearly Meeting, 6289; and of the Philadelphia Yearly Meeting (Orthodox), approximately 4730. *The American Friend*, a bi-weekly religious journal, is published at headquarters. The next sessions of the Five Years' Meeting will occur in October, 1940.

Liberal Branch. This branch was formed in 1827 from a division focused on the preaching of Elias Hicks and the doctrinal issues of the day. It includes six Yearly Meetings federated in the Friends' General Conference, which meets in even numbered years and conducts work in religious education, social service, and advancement of Friends' principles. The membership in 1935 was 16,219. Publications include the weekly periodical, *Friends' Intelligencer*. The society cooperates with all branches of Friends in supporting the American Friends' Service Committee for work for peace and social justice. Headquarters are at 1515 Cherry St., Philadelphia, Pa.

FROST, EDWIN BRANT. An American astronomer, died at Chicago, May 14, 1935. Born in Brattleboro, Vt., July 14, 1866, he received his education at Dartmouth College, graduating in 1886. The following year he became an instructor in astronomy there, and in 1892, assistant professor and director of the observatory. For two years previous he studied at Princeton University, Strassburg, and the Royal Astrophysical Observatory at Potsdam. He attained the status of full professorship at Dartmouth in 1895 and three years later was appointed

to the faculty of the University of Chicago as professor of astrophysics. In 1905, he was made director of the Yerkes Observatory which then contained the largest telescope in the world.

In 1920 he lost his sight, but undaunted, kept in close contact with the astronomical world. He attended the solar eclipse at Westbrooke, Me., on Aug. 31, 1932, and listened to a description given by a member of his family. In that year he retired as director emeritus from Yerkes Observatory.

Dr. Frost's special forte was astrophysics in relation to astronomy, and his researches include particularly stellar velocities in the line of sight, stellar spectroscopy, sun-spots, and thermal radiation of the sun. He devised the plan whereby the light rays of Arcturus were utilized to throw the master switch of a powerful searchlight at the Century of Progress Exposition opening at Chicago in 1933.

For 40 years, Dr. Frost served editorially on the *Astrophysical Journal*, being its editor from 1902. He contributed to many astronomical reviews both in the United States and abroad and edited various publications of the Yerkes Observatory. In 1894 he translated, revised, and enlarged, *A Treatise on Astronomical Spectroscopy* by Dr. J. Schreiner, under whom he had worked at Potsdam. In 1933 he issued his autobiography, *An Astronomer's Life*. He was a member of many astronomical and scientific societies, and the asteroid "Frostia" was discovered by and named for him.

FRUITS. See HORTICULTURE.

GABUN. See FRENCH EQUATORIAL AFRICA.

GAILOR, THE RT. REV. THOMAS FRANK. An American Bishop of the Protestant Episcopal Church, died at Sewanee, Tenn., Oct. 3, 1935. He was born in Jackson, Miss., Sept. 17, 1856, and educated at the Memphis Public Schools, later attending Racine College in Wisconsin, graduating in 1876 with high honors. He then entered the General Theological Seminary in New York, and in 1879 was graduated with the degree of S.T.D., and the Greek prize. In that year he was ordained to the diaconate of the Protestant Episcopal Church and accepted a call to the Church of the Messiah at Pulaski, Tenn. The following year he was ordained priest on September 17, and in 1882 accepted the appointment of professor of ecclesiastical history at the University of the South. A year later he became chaplain of the University of which, in 1890, he was appointed vice-chancellor and executive head. Also, in that year he was elected Bishop of Georgia, but refused the office, as he did call to Chicago and New York, on the grounds that the University needed his services during this critical period of its existence.

However, three years later, he felt that the University's foundation was more secure and he accepted the position of Bishop Coadjutor of Tennessee. On the death of Bishop Quintard in 1898, he succeeded to the Bishopric. He served from 1916 to 1922 as chairman of the House of Bishops of the Protestant Episcopal Church. In 1919, he was one of the Bishops who fought for the administrative reorganization of the church. Up to that time the bishop who had been consecrated the longest held the office of presiding bishop. This was changed so that the office of presiding bishop was made elective and the National Council was set up to serve as the administrative body. Dr. Gailor was the first Presiding Bishop of the Church to be elected, and from 1922-25 served also as president of the National Council. He retired in 1926, believing that the administration of the Church's affairs should be in the hands of younger

men. While serving as president he held the highest office in the Church. The Bishop was neither one of the Anglo-Catholic group nor a low churchman, in the usually accepted meaning of the term. He was conservative in his views and stood staunchly behind the prayer book, which often led him to side with the high churchmen.

In 1908 he became Chancellor of the University of the South and president of the Board of Trustees, and on July 25, 1933, he celebrated the 25th year of his accession to that post as well as the 40th anniversary of his elevation to the episcopate. He was one of the first Bishops of his Church to take a stand against the 18th Amendment. Bishop Gailor was appointed a delegate to the Lambeth Conference of 1920, and in 1923 headed the committee sent to Japan to distribute an emergency relief fund. He served as a vice president of the American Chamber of Commerce and was sent as a delegate to the International Chamber of Commerce held in Paris in 1920, and in that same year was a delegate to the Protestant Ecumenical Conference, at Geneva, the first held there since the Reformation. His long career in the services of his Church and the University of the South won for him many academic honors, including the degree of D.D. from Oxford University.

Dr. Gailor was the author of many books, among which may be mentioned, *A Manual of Devotion* (1887); *The Apostolic Succession* (1889); *Things New and Old* (1891); *The Puritan Reaction* (1897); *Apostolic Order* (1901); *Christianity and Education* (1903); *The Episcopal Church and Other Religious Communions* (1904); *The Communion of Saints* (1908); *The Christian Church and Education* (1910); *The Episcopal Church* (1914).

GALAPAGOS ISLANDS. See EQUADOR.

GAMBIA. A British West African colony and protectorate. Total area, 4003 sq. miles; total population (1931), 199,520. Most of the 14,370 inhabitants of the island of St. Mary resided in the capital town of Bathurst.

Production and Trade. The cultivation of groundnuts was the main industry. A large quantity of foodstuffs was grown for local consumption, including rice, maize, guinea corn, cassava, sweet potatoes, etc. Cotton was grown and used locally. Palm kernels, hides, and wax were other products. In 1934, imports (including specie of £4326) were valued at £326,175 of which cotton piece goods accounted for £78,964; exports (including specie of £53,900), £455,749 of which groundnuts (71,919 tons) represented £387,345.

Government. For 1934, revenue amounted to £221,564; expenditure, £174,663. The area of the colony (consisting of Bathurst and Georgetown and adjacent land) was 69 sq. miles but by an ordinance enacted in 1902 all the Gambia, with the exception of St. Mary's island (4 sq. m.) was placed under the protectorate system of government. Gambia is ruled by a governor aided by an executive council and a legislative council. Governor and Commander-in-Chief in 1935, A. F. Richards.

GANDHI, M. K. See INDIA under History.

GARBAGE AND REFUSE DISPOSAL.

Many garbage and refuse incinerators were built, put under construction, or projected during 1935. New York City, as befits its size, leads in number and capacity of incinerators. On completion of two being replaced, it will have 24 plants with a combined daily capacity of 7480 tons of garbage and combustible refuse. Among the cities that completed or contracted for incinerators in 1935 (with ca-

capacities in tons) are: Cleveland, Ohio, 900; Columbus, Ohio, 150 and 100; Newton, Mass., 120; Nashville, Tenn., 124; Williamsburg, Va., 45. Litigation held up the opening of bids on December 4 for a 1400-ton project at Detroit for 4 plants: 1 of 450, 2 of 350 each, and 1 of 250 tons. This was a PWA project in the name of Wayne County. One of the reasons urged for an injunction was that as a PWA project an unconstitutional delegation of power was proposed. Controversy at Pittsburgh, Pa., continued to hold up a project for a 600- and a 300-ton incinerator for which contracts were awarded in 1934.

Bids for incinerators were received late in 1935 by the cities of Herkimer and Lockport, N. Y., and Wilkes-Barre, Pa. Plans for a garbage and rubbish incinerator at Rochester, N. Y. to supersede a refuse-sorting and salvaging plant built over 20 years ago and to supplement a garbage reduction plant built 15 years ago were ready at the close of the year, with a prospect for taking bids in 1936. The Herkimer incinerator will be operated in conjunction with a sewage-treatment plant. Gas developed in the sewage-sludge digestion tanks will be stored in a gas tank and drawn upon as needed to help burn the garbage and refuse, the percentage of the latter being too low to supply sufficient combustible. At an existing incinerating plant in Philadelphia the city has put in boilers to utilize waste heat from the incinerators and has built 12 garbage digestion tanks. The steam raised by the boilers is used to extract grease from the garbage. The residue, or tankage, will be incinerated without first being pressed to reduce moisture.

Grinding. After watching small but working-scale experiments with grinding garbage conducted by several cities, and making a trial of its own in the summer of 1934, St. Louis, Mo., on February 10, began grinding all its garbage, then dropping it into a sewer leading to the Mississippi River as a final means of disposal. The grinding plant has a capacity of 30 tons per hour. For safety in case of emergencies and at peak hours its duplication is proposed. So far as is known, St. Louis is the first city anywhere in the world to grind all its garbage as a permanent plan. Several cities have experimented with grinding a portion of their garbage and treating it with their sewage. This was done some years ago at Lebanon, Pa., and within the past two or three years at Schenectady, Baltimore, and Indianapolis, and at three universities: Harvard, Illinois, and California. The engineer of the Schenectady sewage-works concluded that combined garbage and sewage-works were advisable and recommended them but the plan was not adopted by the city authorities. Elsewhere, garbage grinding and treatment with sewage is thought to need further study before permanent use, but at Indianapolis the practice was adopted May 10, after previous experimentation, for use while the old riveted-steel garbage-digestion tanks are being replaced with welded-steel tanks.

GAS. Manufactured. From the data reported by 262 companies throughout the United States, whose sales of manufactured gas constitute more than 90 per cent of the total sales, the Statistical Department of the American Gas Association reported a very slight decline in total revenue for the year 1935, although an increase of 3.6 per cent in total sales. The total sales for the year amounted to 372,022,800 cu. ft. of gas, productive of \$381,351,900 in revenue; in 1934 total sales aggregated 359,138,100 cu. ft. at a revenue of \$381,666,300. Domestic use, aside from house heat-

ing, continued to drop both in volume and in revenue, as shown in the accompanying table; and the use of gas for house heating, which showed a rise of 42 per cent in volume in 1934 over 1933, continued to rise in 1935 with a further gain of 24.1 per cent in volume and 20 per cent in revenue.

Gas Sales (MCF):	1935	1934	Per cent change
Domestic	232,645,700	238,422,800	- 2.4
House Heating	39,323,000	31,697,300	+24.1
Industrial and commercial	97,836,800	86,877,400	+12.6
Miscellaneous	2,217,300	2,140,600	....
Total	372,022,800	359,138,100	+ 3.6
Revenue (Dollars):			
Domestic	286,849,100	293,631,800	- 2.3
House Heating	23,294,400	19,433,600	+20.0
Industrial and commercial	69,658,600	67,079,500	+ 3.8
Miscellaneous	1,549,300	1,521,400	.. .
Total	381,351,900	381,666,300	- 0.1

Natural. On the basis of the reports of 171 companies in New York, Pennsylvania, Ohio, West Virginia, Kansas, Louisiana, Oklahoma, Texas, and California, whose total sales of natural gas aggregate almost 90 per cent of the utility sales in those States, the Statistical Department of the American Gas Association reported a gain of 11.4 per cent in gas sales and a gain of 9.4 per cent in revenue in 1935 over the preceding year. The total volume of sales in 1935 amounted to 1,021,922,000 cu. ft. as compared with 917,338,500 cu. ft. in 1934; total revenue for the year was \$344,146,100 as against \$314,461,700 in 1934. Details of the gains in the several classifications are shown in the accompanying table.

Gas Sales (MCF):	1935	1934	Per cent change
Domestic (Including House Heating)	304,603,300	283,388,600	+ 7.5
Commercial	72,914,400	64,680,900	+12.7
Industrial	630,826,900	557,668,000	+13.1
Miscellaneous	13,577,400	11,601,000	.. .
Total	1,021,922,000	917,338,500	+11.4
Revenue (Dollars)			
Domestic (Including House Heating)	206,966,400	193,683,500	+ 6.9
Commercial	33,753,800	30,269,900	+11.5
Industrial	101,481,900	88,690,000	+14.4
Miscellaneous	1,944,000	1,818,300	....
Total	344,146,100	314,461,700	+ 9.4

GEOGRAPHICAL SOCIETY, AMERICAN.

An organization, founded in 1852, to collect and disseminate geographical information by discussion, lectures, and publications; to establish in the chief city of the United States a place where there may be obtained accurate information concerning every part of the globe; and to encourage such exploring expeditions as seem likely to result in valuable discoveries in geography and related sciences.

The society has taken a leading part in the study of polar geography, and some of the polar expeditions of recent years, particularly the aerial expeditions, have been under its auspices. To many more it has furnished maps and especially designed charts and other devices for the simplification of air navigation. It maintains a department of technical training, which conducts research in field astronomy, mapping, and navigation and provides short-term courses in mapping for explorers. Important contributions to the development of geographical science and exploration are recognized in elections to honorary and corresponding memberships and in the bestowal of medals.

The society sponsors six regular lectures annually by distinguished explorers or geographers. In its quarterly, the *Geographical Review*, there were published during 1935 several notable papers dealing with the much discussed problems of land utilization and settlement in different regions, as well as with recent explorations and other phases of modern geographical research. Early in January, 1936, the society was to publish a comprehensive volume on land and society in Chile by Prof. G. M. McBride. There also were completed 20 additional sheets of the society's map of Hispanic America, published in conformity with the International Millionth Map of the World and bringing the total of completed sheets to 70 out of 100.

On July 1, 1935, Dr. Isaiah Bowman, who had served as director of the Society since 1915, assumed the presidency of the Johns Hopkins University, Baltimore. The president of the society in 1935 was Roland L. Redmond; the secretary was R. R. Platt. Headquarters are at Broadway and 156th Street, New York City.

GEOGRAPHIC SOCIETY, NATIONAL. An organization for "the increase and diffusion of geographic knowledge," founded in Washington, D C, in 1888. In 1935 the Society, cooperating with the U.S. Army Air Corps, successfully explored the stratosphere to a height greater than ever before reached by man. The balloon *Explorer II* was sent to a new world altitude record of 72,395 feet (13.71 miles) and during the flight the most comprehensive programme of scientific research ever attempted in the upper air was carried out. The balloon, largest ever built, with Capt. Albert W. Stevens as commander and Capt. Orvil A. Anderson, pilot, rose from a natural bowl in the Black Hills near Rapid City, So. Dak., at 7:01 A. M., mountain time, on November 11, achieved its maximum altitude at 11:40 A. M., and returned to earth without mishap at 3:14 P. M. near White Lake in eastern South Dakota. A 17-foot rip in the balloon, occurring during inflation, was successfully repaired on the spot before the take-off.

The *Explorer II* had a gas capacity of 3,700,000 cubic feet. Its spherical metal gondola, made of a magnesium alloy lighter than aluminum, was 9 feet in diameter. The balloon, inflated with helium, carried a weight of 8518 lb. including gondola, instruments, ballast, and crew of two. Captains Stevens and Anderson were awarded the Hubbard Gold Medal, the highest honor of the Society, for geographic achievement. An illustrated account of the flight by Captain Stevens appeared in the *National Geographic Magazine* for January, 1936.

The Second Byrd Antarctic Expedition, to which modest grants were made by the Society, returned to the United States in May. Rear-Adm. Richard E. Byrd, U.S.N., ret., reported to the Society new explorations showing that Antarctica is a single continent and not divided by a strait as some explorers had believed. Traveling thousands of miles by aeroplane and dog sled, members of the Expedition discovered a vast new plateau and largely remapped the continent's Pacific quadrant. The Society accorded a reception to the expedition personnel upon their return to Washington, D. C., and presented an illuminated scroll to Admiral Byrd, who already had received the Society's Hubbard Gold Medal and a Special Gold Medal of Honor, setting forth the contributions to geography made by his various expeditions. The first complete illustrated report of the expedition by Admiral Byrd appeared in the October *National Geographic Magazine*.

The Society's Yukon Expedition led by Bradford

Washburn accomplished the first crossing of the lofty St. Elias mountain range on the Alaska-Yukon (Canada) border, removing a 2000 sq. mi. blind spot from the map of that region. In Idaho, an expedition of the Society, cooperating with the U.S. Geological Survey, traversed 300 miles of the turbulent Salmon River through its forbidding and little-known canyon, one of the largest primitive areas in the United States.

To aid its million members and the public generally in following fast-shaping world events, the Society in 1935 issued new maps of the World, of Africa, and of Ethiopia. The World map, 44 by 23 in., with new data based in part on the Society's own explorations, is the first to show Antarctica as a single continent, as determined by Admiral Byrd. The map includes new islands in the Arctic north of Asia, and shows the route of the new American air line across the Pacific. The new map of Africa, 31½ by 29 in., shows the routes of many new motor roads, airways, and recent boundary changes.

In the *National Geographic Magazine* for 1935 many interesting, varied, and timely articles were published, including those on Ethiopia, Eritrea, the Suez Canal, Aden, and the Maltese Islands; Amelia Earhart's description of her flight from Hawaii to Oakland, Calif. (May); "Ancient America's Finest Sculptures" by Dr. J. Alden Mason, and a detailed description of Delaware, Maine, Minnesota, and Pennsylvania. A new Cumulative Index to the Magazine from 1899 to 1934 inclusive was also issued.

Among the publications of the Society may be mentioned: *Hunting Wild Life with Camera and Flashlight*, by George Shiras, 3d; *Our Insect Friends and Foes and Spiders*, by several authors; the technical reports of the National Geographic Society-Army Air Corps Stratosphere Flight of 1934, and a technical monograph by Dr. A. E. Douglass, entitled *Dating Pueblo Bonito and Other Ruins of the Southwest*.

GEOGRAPHY. See ANTHROPOLOGY; EXPLORATION; POLAR RESEARCH.

GEOLOGY. The science of geology is not one which lends itself to rapid development over short periods of time. During the past year, however, a distinct trend could be noted in the greater detail with which both old and new problems in geology are being attacked. This has been especially noticeable in the physical-chemical investigations being carried on by a great many workers and the bearing of these fundamental studies on the complex processes by which the rocks, minerals and ore, making up the crust of the earth, are formed. The continued application of geophysical methods to the study of earth structures has received increasing attention and numerous cooperative projects involving the use of these methods are in progress. Such work should eventually lead to the accumulation of more exact data upon which a more accurate interpretation of the origin and history of the earth's crust can be made. The use of applied geology has been greatly increased by both private and governmental interests. Its application has been particularly marked in the study of the foundations for the large engineering structures such as are being carried on by the government at the present time, its use in flood control problems, water reservoirs, and in the continual search for new mineral deposits of value or in the development of known deposits.

Societies. The Geological Society of America held its 47th annual meeting at the University of Rochester, Rochester, N. Y., Dec. 27 to 29, 1934,

At this meeting the Penrose Medal of the Geological Society was presented to Charles Schuchert, emeritus professor of Paleontology, Yale University. Percy E. Raymond of Harvard University, a former student of Professor Schuchert, made the presentation address and called attention to the recipient's intense love of fossils in his early days which led him to learn more from nature than he might have learned from a professor, had an education been open to him. Dr. Raymond also spoke of the many contributions made by Professor Schuchert to the fields of paleontology, paleogeography and stratigraphy; to his widely used textbooks and finally to the great number of students whom he taught, helped, and influenced.

W. H. Collins, retiring president of the Society, chose as his address the subject "Geology and Literature." He stated that the generous bequest of Dr. R. A. F. Penrose to the Geological Society has tremendously increased its publication facilities and that it would be wise to consider where the Society was heading in the field of literature.

Most geological writings are written for geologists or those interested in the technical or practical phases of the science. Beautifully printed forms may be produced but it is not literature according to definition. The difference between literature and scientific writings was stressed. Literature is always concerned with some aspect of human affairs and the facts needed to give expression to the writer's conclusions may be changed to suit his purpose. Most scientific writings, on the other hand, usually have but little human interest and must be accurate.

The geologist, however, has two assets which could be put to greater use. He can draw upon the seemingly inexhaustible wonders of nature to stir the imagination instead of falling back upon interest in human affairs. He can excite the pleasure that every one has in the exercise of the reasoning faculty, for, though usually presented in a dull manner, every geologic problem is a potential mystery story.

Dr. Collins pointed out that many geologic papers are needlessly long and that others are unimportant. Only a few works in geology are read longer than during a single generation and one reason for the poor literary quality of geologic writings may be that but few of them are required to make a profit for the publishers.

The latter part of his address dealt with the small percentage of geological writings of wider appeal and the possibility of more writings of this type. In addition to his contributions to the knowledge of earth features and materials, the geologist should attempt to make his writings more inspiring and of broad, general interest. Much could be done towards developing the layman's interest in his surroundings by short descriptive articles on such things as public parks, etc.; essays; historical aspects of geology, including biography, and poetry. These are subjects well worthy of literary abilities.

In closing Dr. Collins repeated his reason for choosing this difficult subject as an address. He pointed out that there has been little time for cautious trial of the enlarged activities of the Society and that it would be surprising if there were not some mistakes made, some waste and, perhaps, some harm done. He felt that there was a definite and immediate need for the Society to consider as clearly and fundamentally as possible the problems resulting from the Penrose bequest.

The Paleontological Society of America met at

the same time and place. Percy E. Raymond, the retiring president of the Society, addressed a joint meeting on "Pre-Cambrian Life." This was considered a fitting subject to follow the address of C. K. Leith, retiring president of the Geological Society of America the preceding year, who had spoken on the pre-Cambrian.

Dr. Raymond pointed out that ever since Sir William Logan demonstrated that the Cambrian Rocks are not the oldest sediments, geologists and paleontologists have searched for evidence of life in the pre-Cambrian. He then reviewed all the important "finds" which have been accepted by many authorities and added that many doubts as to their organic origin still exist. Blue-green algæ, brown algæ, sponges, and "worms" have been found in some of the least metamorphosed of the pre-Cambrian rocks, but even though the organic origin of these is accepted, the classifications are more difficult to prove.

A study of Cambrian Fauna and Flora throws some light on the life that must have existed in the pre-Cambrian. These include naked Protozoa, siliceous sponges, primitive coelenterates, segmented "worms," inarticulated brachiopods, and trilobites or their ancestors. If these different types were all present in the pre-Cambrian why are there so few pre-Cambrian fossils? The theories offered to explain this were given:

(1) Destruction of pre-Cambrian fossils during the changes which took place in the metamorphism of the rocks. This holds for most of the pre-Cambrian strata.

(2) Daly's theory: Pre-Cambrian organisms had no skeletons because of the lack of available calcium in the sea. This theory has found considerable acceptance. He concludes that in the absence of an effective scavenging system there would be an accumulation of organic matter, which, on being decomposed by bacteria, would produce a great deal of ammonia, which would cause the precipitation of such calcium as was then in the ocean.

(3) Lane's theory: The pre-Cambrian oceans were acid, thus preventing the formation of calcareous skeletons.

(4) Walcott's theory: All the pre-Cambrian strata now accessible were deposited on land in fresh water of low calcium content.

(5) Chamberlin's theory: Organisms originated on land, in the soil, migrating thence through rivers to the oceans, which they did not reach until Cambrian times.

(6) Brooks' theory: The pre-Cambrian organisms lacked hard parts because they lived in the surface waters of the oceans, where skeletons would be detrimental, because of their weight.

(7) The speaker's modifications of the Brooks theory: Skeletons appeared as the result of the adoption of a sessile or sluggish mode of existence.

John E. Wolff, retiring president of the Mineralogical Society of America, spoke on the Crazy Mountains of Montana. A brief description of the topographic and geological features of the range was given, followed by a discussion of the many different types of alkaline and lime-alkali rocks which have been intruded into the area.

The following important papers were presented during the meetings of the Geological Society of America:

John P. Bulwalda and Beno Gutenberg spoke on the investigation of the Beartooth Overthrust by seismic methods. This was believed to be the first attempt to secure by seismic reflection methods

greatly needed information regarding the form of thrust surfaces. The results obtained were believed to demonstrate the feasibility of determining the altitude and form of overthrust surfaces by reflection methods.

In discussing geology in relation to the spread of man to North America, Ernst Antevs stated that man first spread to this continent after the culmination of the last glaciation and that a knowledge of geologic and climatic evolution of the late Quaternary enables one to rule out some epochs and to suggest others. Although Bering Strait could be crossed on ice, or in water crafts in summer, there probably was an ice barrier across entire western Canada. Geology can also be useful for the dating of finds of ancient man, particularly in glaciated regions, but also in the semi-arid Southwest, where past changes in moisture may have been the result of glaciation to the north.

David T. Griggs, in a paper on plasticity of rocks under high pressure, discussed an apparatus which permits the study of rock deformation under all magnitudes of confining pressure between that at the surface and that at a depth of 22 miles in the earth's crust. It is possible to study the change in the mechanical properties of the rocks with increasing confining pressure. He cited the change from the brittle condition to plastic flow; the increase in strength as the pressure is raised; and the relation between tension cracks, shear failure, and plastic flow.

"Glacial Anticyclones about Pleistocene Continental Glaciers of North America" was discussed by W. H. Hobbs. He cited the outwash plains of sand and gravel bordering the Greenland continental glacier which in fall and winter are dry due to lack of water from the melting ice and are swept by the fierce down-slope winds from the glacier. He described the stone lattice effects and pebble-armoured surface of the plain which are typical of deserts and pointed out that these features have been noted in the glaciated areas of North America, but as far as known they have never been satisfactorily explained.

The history of the Grand Canyon of the Yellowstone was discussed by Arthur D. Howard. According to R. M. Field, certain high level basalt patches along the lower course of the Yellowstone are remnants of a once extensive lava dam which blocked the Yellowstone valley and formed a great lake of which Yellowstone Lake was a part; and this flow was responsible for deposition of sediments, remnants of which occur along the walls and rim of the canyon. Howard pointed out that the high level basalts are older than the rocks in which the canyon is cut and that glacial damming to a great height is indicated by the distribution of glacial boulders. He concluded that such a dam satisfactorily explains all observed features.

Chester R. Longwell, in a paper on the geology of the Boulder Reservoir Floor, described seven different rock formations which make up the area and concluded that evidence suggests strongly that the Colorado has occupied essentially its present course since it first entered the region.

A. L. Lugin spoke on geologic evidence bearing on Pleistocene Man in Nebraska, saying that the Pleistocene deposits in Nebraska have been correlated with considerable certainty and that Yuma and Folsom types of human artifacts have been found which, on the basis of sedimentation, physiographic and paleontologic evidence seem to be not younger than Wisconsin or probably immediately pre-Wisconsin. The most convincing evidence

of Pleistocene man was found in 1934 at the base of deposits of Peorian age associated with mammoth, bison, and other remains. Human artifacts are also associated with fossil remains of Pleistocene vertebrates at a number of other sites and some may antedate the Recent period.

"Nature and Genesis of Batholiths" was the title of a paper presented by C. M. Nevin and Evans B. Mayo. Contrary to the generally accepted belief that batholiths are emplaced during the last stages of an orogeny, while the area is still under the influence of regional compressive stresses, they believe, after considering the isotherms, that the granite is slowly melted during the period of erosion immediately following deformation. An orogeny is genetically related to a batholith in that it determines the locus of magma formation, but the actual intrusion is distinctly later. It coincides with the great regional uplifts that affect folded areas after compression has ceased.

Charles Schuchert in a paper, "Cambrian and Ordovician Stratigraphy and Faunas of North-western Vermont," discussed the difficulties in determining the successions, faunas, and structure of that region. The determination of fossils is extremely difficult due to cleavage and fragmental conditions. The formations and faunas that have thus far been discovered in the Cambrian and early Ordovician were presented, the formations were redefined and two new ones named.

W. T. Thom, Jr., speaking on gravity observations and basement structure, pointed out that correspondence between gravity anomalies and local geologic conditions such as basement structural features has been observed in several localities and concluded that the pendulum method of observing gravity may be of greater importance to geologists and others interested in underground exploration than has generally been appreciated.

The Society of Economic Geologists held a joint meeting with the Mining Geology section of the American Institute of Mining and Metallurgical Engineers at the latter's annual New York meeting in February, 1935. Among the important papers presented were "Supergene Sphalerite, Galena and Willemite at Balmat, N. Y." by John S. Brown. He cited the downward fading of these minerals; their lateral fading from the locus of an old sink-hole; the fact that the peculiar relationships hold only at this spot in the Balmat mine and are not present in the nearby Edwards mine, and their microscopical features in support of the hypothesis that sphalerite, galena, chalcocopyrite, and magnetite have replaced primary sulphides by downward migration. Such an unusual origin for these minerals, usually considered of hypogene origin, was received with some skepticism by Profs. A. M. Bateman and L. C. Graton, who raised the question of whether they might not be due to later hypogene invasion. Dr. D. F. Hewett emphasized that in any such study the old oscillations of ground water level must also be kept in mind.

In a significant paper by W. H. Emmons "On the Origin of Certain Systems of Ore-bearing Fractures," he stated that certain types of fractures were due to expelled vapors from a cooling granite collecting near the tops of cupolas in batholiths. These vapors are believed to exert sufficient pressure to fracture the hoods and roofs of batholiths above the cupolas, and, if true, one would expect to find that the fracture systems above cupolas are arranged in patterns that depend partly on the shape of the cupola. He cited a number of ex-

amples which appeared to support his theory. The various steps involved and the effects produced by such fracturing were discussed in some detail.

"Some Fundamental Aspects of Mineralization in Tests on Absorption, Permeability and Metasomatism of Limestone" was presented by George W. Bain. He demonstrated the possibility of applying recent advances in physical chemistry to mineralogical problems by citing some of the work that had been done in the Vermont Marble deposits.

Other Papers Published During the Year. "Hydrothermal Experiments with Gold," by Stephen P. Ogryzlo, *Economic Geology*, June-July, 1935.

The experiments in this investigation on the solvent action of various substances on gold under high temperature and pressure conditions were made to imitate as closely as possible the conditions existing in nature. The experiments showed that gold may be transported either in acid or slightly alkaline aqueous solutions and also in the vapor phase as AuCl_3 . In a closed system, however, the pressure would tend to prevent volatilization of AuCl_3 . But under some conditions of reduced pressure the gold may be transported in the vapor phase. On account of the uncertain pressure factor it is difficult to place limits in the temperature at which volatilization would take place in nature.

"High-Temperature Mineral Associations at Shallow to Moderate Depth," by A. F. Buddington, *Economic Geology*, May, 1935.

The author suggests the name Xenothermal for mineral deposits formed at high temperatures and moderate to shallow depth and discusses various types of deposits which he believes belong in this classification. These include: platinum deposits of the Waterberg district in the Transvaal, Africa, and the Yellow Pine Mining District, Nevada; magnetite-apatite-pyroxene deposits of Cerro Mercado, Mexico, Barth, Nevada, and Algarrobo, Chile, cassiterite and cassiterite-wolframite deposits of the Ikuno district of Japan and Llallagua, Bolivia, molybdenite-orthoclase-quartz deposits of Climax, Colorado, scheelite deposits of the Atocha district, California; tourmaline-cherty quartz or jasperoid deposits in the Oquirrh Mountains, in the Oregon Cascades, in Panama and at Ely, Nevada; tourmaline-chalcopryrite deposits at the Braden mine, Chile, the Cactus Mine, Utah, and others.

"Spectrographic Evidence on Origin of Ores of Mississippi Valley Type," by L. C. Graton and G. A. Harcourt, *Economic Geology*, November, 1935.

As a result of spectrographic studies, it was found that quantities of the same relatively rare elements in the sphalerite of the ores of the lead-zinc deposits of the Mississippi valley compare favorably with those found in the sphalerite deposits now generally accepted as of magmatic origin.

The procedure followed in the spectrographic determinations and the results obtained are given, with a detailed discussion of the similarities and differences which occur. Additional evidence for the magmatic origin of the Mississippi valley deposits that has been presented by other writers is summarized. The authors conclude that the origin of these lead-zinc deposits has not yet been proved, although the spectrographic study adds one more line of evidence supporting the magmatic theory of origin.

"Waters, Magmatic and Meteoric," by Waldemar Lindgren, *Economic Geology*, August, 1935.

The paper gives definitions of magmatic and meteoric waters and suggests that the present tendency to minimize the quantity and importance of meteoric waters has gone too far, that meteoric water in permeable sedimentary rocks may easily reach a depth of 8000 feet and possibly 10,000 feet. In igneous and metamorphic rocks the cementation generally prevents any active penetration by surface waters below a depth of about 3000 feet. It is also thought that the present distribution and composition of the water in a body of rock may be entirely different from that prevailing at an earlier date and may have changed several times since the time when certain ore deposits were formed.

Magmatic waters are considered as a principal agency in the formation of mineral deposits, and in the case of deep-seated intrusion below the limit of moving meteoric waters, the deposits surrounding them are no doubt wholly of magmatic origin.

It is believed that the "telemagmatic" lead-zinc deposits of the Mississippi Valley and other districts in Europe were formed by mixtures of magmatic and meteoric waters, generally saline, and that they were formed at comparatively low temperatures and that they are most closely related to the epithermal deposits.

The deep waters in past periods in the Witwatersrand district are also considered and a detailed analysis made of the events prevailing during the Keweenaw in the region of the Lake Superior copper deposits. The conclusion is reached that many and important changes in the water conditions have taken place and that the deposits are the result of both magmatic and meteoric waters.

"The System, MgO-FeO-SiO_2 ," by N. L. Bowen and J. F. Schairer, *American Journal of Science*, February, 1935.

Because of the great importance of the ferromagnesian silicates as rock-forming minerals a study of the equilibrium system of MgO-FeO-SiO_2 has been made. The three series of solid solutions, the oxides, MgO-FeO ; the orthosilicate, olivine; and the metasilicate, pyroxene, were studied, as well as temperature relations and mix-crystal series.

"The Origin of the Potash-Rich Rocks," by Ruth Doggett Terzaghi, *American Journal of Science*, April, 1935.

The term "orthoclase rich" is applied to rocks whose composition lies in the orthoclase held of the feldspar equilibrium diagram. Vogt has suggested that potash and plagioclase feldspars may be in equilibrium with a liquid having a higher $\text{Or} : \text{Ab} + \text{An}$ ratio if the melt contains relatively large quantities of water, as is the case toward the end of the crystallization process. High pressure may be expected to displace equilibrium in the same sense. It is also possible that some of the potash rich rocks which appear to be of igneous origin may have been produced by metasomatic processes, chiefly by the feldspathization of quartzite and that during hydrothermal alteration and weathering of igneous rocks the potash-soda ratio may undergo a considerable increase not always accompanied by easily diagnosed changes in the appearance of the rock.

"Age of Allanite from Amherst County, Virginia, U. S. A.," by John Putnam Marble, *American Journal of Science*, October, 1935.

This paper, by a member of the Committee on Determination of Geologic Time, Division of Geology and Geography, National Research Council, gives an analysis of a specimen of fresh allanite from a pegmatite connected with hypersthene-granodiorite in Amherst County, Virginia. A "lead-ratio" of 0.111, corresponding to an age of approximately 800 million years, is in fair agreement with geological field evidence.

"Mother Lode and Sierra Nevada Batholith," by Ernst Cloos. *Journal of Geology*, April-May, 1935.

A mineralized and silicified zone which dips more gently than the wall rock and is accompanied by reverse faulting or thrusting is defined as the "mother-lode" structure. One of these occurs on the western border of the Sierra Nevada batholith. The paper discusses the region in some detail and concludes that the plunge of the batholith to the south accounts for the increase in gold values from south to north, as the highest values are believed to occur where the shallowest levels of the batholith are encountered.

"Relations of Anorthosite to Granite," by Frank F. Grout and W. W. Longley, *Journal of Geology*, February-March, 1935.

The authors believe that the difference between anorthosites of the Adirondacks and those of Minnesota are due largely to the intense deformation of the former during or after crystallization, such deformation having obscured the relations of the rocks. The conclusions reached from a study of the anorthosite and granite at Duluth are that the granitic phases of the magma seem to have evolved from a gabbro magma some time after the anorthosite was evolved. Both are related to gabbro, but not differentiated directly from each other. Gradations from granite to anorthosite originate by inclusion and reaction.

"Geologic Deductions from Earthquakes of Deep Focus," by J. S. de Lury, *Journal of Geology*, October-November, 1935.

Seismologists have established the existence of a high degree of rigidity of rocks down to great depths, but the author does not accept the commonly held view that earth-

quakes are of shallow origin and that shallow rocks alone can permit the slow accumulation of elastic stresses. He believes that growing evidence indicates that earthquakes probably originate in all levels down to depths of 700 or more kilometers and that this evidence is disturbing to the assumptions of isostasy and to those hypotheses which rest on the concept of a shell of weakness.

"Epicycles of Erosion in the Valleys of the Colorado Plateau Province," by Reed W. Bailey, *Journal of Geology*, May-June, 1935.

Recent changes in the erosion cycle of the Colorado Plateau Province are discussed and the conclusions reached that utilization of the region by man and the consequent reduction and modification in the plant cover are major factors in starting the new epicycle of erosion.

"Studies on the Zeolites." Part viii. "A Theory of the Vapor Pressure of the Zeolites, and of the Diffusion of Water or Gases in a Zeolite Crystal," by Max H. Hey, *Mineralogical Magazine*, London, September, 1935.

He proposes an equation to fit the experimental data on the behavior of zeolites on dehydration and on their capacity for absorbing other gases and vapors in place of the water removed.

New Books:

Structural Geology, by Bohuslav Stöckes and Charles Henry White (Macmillan and Co., Ltd., London, 1935). An elaboration of the work of Dr. Stöckes which was published in Czech and German. In rewriting, the text has been rearranged and expanded and the subjects and illustrations increased nearly twofold. It deals especially with the structure of Economic Mineral Deposits.

Evolution of the Congo Basin, by A. C. Veatch (Geological Society of America, Memoir 3, Judd and Detweiler, Inc., 1935). This book solves many of the problems of the Congo Basin by assembling and piecing together the great amount of data that is now available on the Congo and adjoining areas, together with the author's long experience in the region.

Limestone and Its Products, by Alfred B. Searle (Ernest Benn, Ltd., London, 1935). The first textbook to treat the subject of limestones as a whole, and especially their nature, production, and uses. Written primarily for industrialists and not geologists or mineralogists. It points out the manifold industrial uses, its products, indicates the kinds desired by some of the principal industries, and describes the modes of preparation as well as the properties required in order that various products may be suitable for the numerous purposes for which they can be employed.

Sahara, the Great Desert, by E. F. Gautier, translated by Dorothy Ford Mayhew (Columbia University Press, New York, 1935). A translation from the 2nd French edition, *Le Sahara*, (Payot, Paris, 1928) and from hitherto unpublished material supplied by the author, with additional drawings and a map by Paul Laune. The original was hailed as a geographical classic. The translation contains a new conclusion, giving a vivid picture of present day Sahara. It also contains a good picture of the geological history of the region.

The Solar System and Its Origin, by Henry Norris Russell (The Macmillan Co., New York, 1935). A series of lectures given at the University of Virginia on the Page Barbour Foundation in 1934. It is a general presentation of the present state of knowledge and theory and not a technical contribution to cosmogony.

The Changing World of the Ice Age, by Reginald Aldworth Daly (Yale University Press, New Haven, Conn., 1934); Humphrey Milford, Oxford University Press, London). A summary of the work and thought of the author on the problem of sea level during Pleistocene, as well as the implications that arise as to earth dynamics and stability and related problems.

Geology of Natural Gas, A Symposium, by Henry A. Ley (American Association of Petroleum Geologists, Tulsa, Oklahoma; Thomas Murry and Co., London, 1935). The geology of the most important known occurrences of natural gas on the North American Continent, methods of estimating natural gas reserves and resumé of the industry. Indispensable to all geologists engaged professionally in this field.

Tectonic Essays, Mainly Alpine, by E. B. Bailey (Clarendon Press, Oxford, 1935). An important work summarizing the discoveries of tectonic structure of the Alps. *Géologie Appliquée*, by E. Raguin (Masson et Cie., Paris, 1934). A brief, concise outline of the fundamental principles of geology and their practical application. Largely for those employed in fields in which geologic problems arise and to beginning students of applied geology.

Invertebrate Paleontology, by William H. Twenhofel and Robert R. Shrock (McGraw-Hill Book Co., Inc., New

York and London, 1935). A textbook in which the subject matter is adapted to the needs of the beginning student. Each invertebrate phylum is treated with about the same completeness, explaining the relations between skeletal parts and soft tissues, the environment and their proper place in the evolution of organic development.

Historical Geology of the Antillean-Caribbean Region, by Charles Schuchert (John Wiley and Sons, Inc., New York; Chapman and Hall, Ltd., London, 1935). A first attempt to bring together the geologic history of the Antillean-Caribbean region. It contains a summary of all work done in the region, an extensive bibliography, and many paleogeographic maps.

A Monograph of the Echinoidae II, by Th. Mortensen (Copenhagen, 1935). It deals with the fundamentals of the taxonomy of the echinoids and in many respects departs widely from the scheme of classification now current among paleontologists.

On Several Archaean Rocks from the South Coast of Norway, II, The South Norwegian Hyperites and Their Metamorphism, by W. C. Brugger (I. Kommissjon Hos Jacob Dyrbywad, Oslo, 1935). An exhaustive study of the hyperites from the Kragerø region and their different stages of metamorphism, to "Coronites" to "hornblende-gabbros" and to amphibolitic rocks as well as into different scapolite-bearing rocks.

GEORGETOWN UNIVERSITY. A Roman Catholic institution of higher education for men in Washington, D. C., founded in 1789, and conducted by the Society of Jesus. In the autumn of 1935, 2197 students were enrolled. The faculty numbered 456. The libraries contained 219,903 volumes. President, the Rev. Arthur A. O'Leary, S.J., Ph.D., D.D.

GEORGE WASHINGTON UNIVERSITY. THE. A nonsectarian institution of higher learning for men and women in Washington, D. C., founded in 1821. The enrollment for the first semester of 1935-36 was 6159. The enrollment in the 1935 summer session was 1375. The faculty numbered 359. A new science hall was opened in the fall, and a women's residence hall, the gift to the University of Mrs. Henry Alvah Strong, was under construction. In further development of the programme in theoretical physics inaugurated last year, Dr. Edward Teller, Hungarian physico-chemist, was this year appointed Visiting Professor, Dr. George Gamow, formerly of the Institute of Science at Leningrad, was made a member of the resident faculty. The total endowment amounted to \$2,249,428, from which the income for 1934-35 was \$60,352. The total income from all sources was \$1,246,748. The library contained more than 108,000 volumes. President, Cloyd Heck Marvin, Ph.D., LL.D.

GEORGIA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,908,506; on July 1, 1934, by latest Federal estimate, 2,911,000; 1920 (Census), 2,895,832. Atlanta, the capital, had (1930) 270,366 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu.	Value
Cotton	1935	2,177,000	1,060,000 ^a	\$58,035,000
	1934	2,103,000	968,000 ^a	58,656,000
Corn	1935	4,045,000	44,495,000	26,697,000
	1934	3,927,000	39,270,000	32,987,000
Peanuts	1935	789,000	552,300,000 ^b	17,674,000
	1934	779,000	467,400,000 ^b	14,957,000
Tobacco	1935	72,000	68,053,000 ^b	12,923,000
	1934	51,600	31,951,000 ^b	6,107,000
Hay (tame)	1935	801,000	451,000 ^c	4,961,000
	1934	773,000	414,000 ^c	5,589,000
Peaches	1935	...	5,628,000	4,784,000
	1934	...	5,610,000	4,488,000
Sweet potatoes .	1935	89,000	8,010,000	6,408,000
	1934	89,000	7,120,000	6,266,000
Oats	1935	356,000	7,298,000	4,233,000
	1934	336,000	6,384,000	4,533,000
Potatoes	1935	21,000	1,365,000	1,024,000
	1934	20,000	1,360,000	1,306,000

^a Bales. ^b Pounds. ^c Tons.

Education. The number of persons of school age inhabiting the State was reckoned, for the academic year 1934-35, as 867,727. Pupils enrolled in the public schools numbered 764,865. Of these, 656,940 were in common schools or elementary grades, and 107,925 were in high schools. The expenditures of the previous year, 1933-34, for public-school education in the State totaled \$16,078,502. The salaries of teachers averaged \$695.69 by the year. The State made payments to the public schools in 1935 to the extraordinary total of some \$9,000,000; this included the discharge of unpaid State aid for the years 1929-31, as reported by the *Journal* of the National Education Association.

Charities and Corrections. Control of the eleemosynary institutions of the State was exercised in 1935 by a Board of Control of Eleemosynary Institutions, which had been set up in 1932. Its 12 members were: the Governor, *ex officio*, one member for the State at large, and one to represent each of the State's Congressional districts. Under the authority of this board a Department of Public Welfare supervised county jails and almshouses and private institutions for the care of children and other dependents and performed duties in connection with the work of the juvenile courts.

The State institutions under the Board of Control were: Milledgeville State Hospital (mental cases), at Milledgeville; State Tuberculosis Sanatorium, at Alto; Georgia Training School for Mental Defectives, Gracewood; for juvenile correction, the Georgia Training School for Boys, at Milledgeville, and Georgia Training School for Girls, at Atlanta; Georgia School for the Deaf, Cave Spring; Georgia Academy for the Blind, Macon; Confederate Soldiers' Home, Atlanta.

Legislation. An act was passed to submit to a referendum the questions: whether the people favored repealing the prohibition of liquors, whether they wished repeal as to beer and whether they wanted it as to wines. With regard to legislation to bring the State into conformity with schemes of the Federal "New Deal," Governor Talmadge's hostility to the Federal programme acted as a check. He vetoed a measure to submit to the popular vote a proposal to amend the State constitution so as to allow the payment of pensions to persons over the age of 65 years. He also vetoed a bill to validate the sale of the State's highway certificates to the Federal Government, which Administrator Ickes of the PWA had demanded as a prerequisite to loans from that organization. A law was passed to authorize the sexual sterilization of persons in the State's institutions, as designated by a board of eugenics. On the invitation of the lower house, Huey Long of Louisiana visited that body on February 5 and spoke on his "share the wealth" scheme of redistribution of incomes.

Political and Other Events. The popular vote taken on May 15 in a referendum on the proposed repeal of State prohibition of alcoholic beverages gave on the unofficial count a slender majority of 227 votes against repeal as to distilled liquors, out of a total vote of some 164,000; repeal as to beer and wines was carried. The official count, which followed, was contested in the courts, the opponents of repeal seeking to prevent the certification of the vote in three counties. The State Supreme Court ruled in October that the vote had repealed the State's prohibition laws.

The State's law of 1866 against sedition, a relic of the early days of Reconstruction, was invoked against a Negro, Angelo Herndon, accused of Communist activity. After he had been convicted

under this law and sentenced to 20 years of prison, the Superior Court of Fulton County, on his appeal, held the old law unconstitutional, December 7, and freed him on bail.

Upon Governor Talmadge's vetoing a bill to validate the State's sale of highway obligations to the Federal Government, Administrator Ickes withdrew on April 18 intended loans from the PWA to the State. Administrator Hopkins of the FERA ousted State agents from the control of Federal aid to the indigent unemployed on April 19, and put the task in Federal hands. The funds for this aid had come from the Federal Treasury in 1934 to the extent of 95.5 per cent, the State making no contribution and the subdivisions relatively little. Postmaster-General Farley threatened to exclude from the second-class mails, on June 13, the market bulletin of the State's department of agriculture, which had published matter adverse to the Federal Administration and thereby allegedly impaired its right to the second-class mail as an agricultural periodical.

The hostile acts of the Federal Administration were preceded and accompanied by attacks upon it, delivered by Governor Talmadge. He attacked the processing tax on cotton on April 16: a tax apparently popular with the majority of the farmers of his own State. On the 22d he declared his opposition to the renomination of President Roosevelt; in later speeches and statements he carried on a general and bitter criticism of the course of the Federal Government.

A strike at the Callaway cotton mills, opposed by some of the employees, who petitioned for the protection of troops, led Governor Talmadge on March 4 to send seven companies of the National Guard to Manchester and La Grange to protect the mills.

Officers. The chief officers of the State, serving in 1935, were: Governor, Eugene Talmadge; Secretary of State, John B. Wilson; Attorney-General, M. J. Yeomans; Treasurer, George B. Hamilton; Auditor, Tom Wisdom; Comptroller, William B. Harrison; Superintendent of Schools, M. D. Collins; Commissioner of Agriculture, Tom Linder; Commissioner of Commerce and Labor, H. M. Stanley.

Judiciary. Supreme Court: Chief Justice, Richard B. Russell; Assistant Justices, John B. Hutcheson, R. C. Bell, Marcus W. Beck, Samuel C. Atkinson, S. Price Gilbert.

GEORGIA, UNIVERSITY OF. A State institution of higher education for men and women in Athens, Ga., chartered in 1785. The enrollment in the 1935 summer session was 1761 and for the autumn term 2733. The faculty numbered 155. The productive funds amounted to \$425,000. The library contained 101,000 volumes. The Georgia State College of Agriculture and the Mechanic Arts and the Georgia State Teachers College have been integrated with the university, all three institutions constituting the University of Georgia. President, H. W. Caldwell, L.L.D.

GEORGIAN SOVIET SOCIALIST REPUBLIC. A republic of the Transcaucasian S.F.S.R. of the Soviet Union. It includes the Abkhassian Soviet Socialist Republic, the Ajaristan Autonomous Soviet Socialist Republic, and the South Ossetia Autonomous Region. Area, 26,981 sq. miles; population (1933), 3,110,600. Tiflis, the capital, had 414,000 inhabitants; Kutais, 57,646; Poti, 15,782; Samtredi, 15,120; Stalinissi, 13,386; Telav, 10,050.

Production. The area under cultivation totaled

2,273,635 acres of which 86,450 acres were under tea. By Jan. 1, 1933, 36.6 per cent of the farms had been collectivized. The forest lands contained many rich varieties of timber. Manganese mining was the most important industry—the deposits were estimated at 250,000,000 tons. During 1933 the output of tea amounted to 748,000 kilograms. In 1933 the gross production of Georgian industry was valued at 250,000,000 rubles (ruble was valued at \$0.5146 in the U.S.S.R.). Railway lines extended 570 miles.

GEORGIA SCHOOL OF TECHNOLOGY. An institution for the scientific and technical education of men in Atlanta, Ga., founded in 1888. The enrollment for the autumn of 1935 was 1864, while that in the summer session was 328. The faculty numbered 154. The endowment amounted to \$431,000, and the income from appropriations and fees was \$509,876. There were 33,564 volumes in the library. President, Marion Luther Brittain, LL.D.

GERMAN LITERATURE. Statistics indicate that the output of German publishing firms was considerably larger in 1935 than during the two years previous, while the sale of newspapers and periodicals declined. Though the gain is attributable primarily to the growing importance of propagandistic literature, allowance must be duly made for a heightened interest in *belles lettres* and imaginative literature. Government surveillance was exercised in accordance with National Socialist principles. The list of authors living in exile received important additions. Vienna, Zurich, Amsterdam and even Paris became important German publishing centres. Books issued in these cities are included in the following survey.

Novels. Fiction offering biography in disguise was in fashion. Friedrich Schreyvogel's *Grillparzer* and Wolfgang Goetz's *Der Mönch von Heisterbach* are representative instances. Bach is the subject of *Gottes Orgel*, by Kurt Arnold Findeisen; Haendel is the hero of Ernst Wurm's *Seine Kraft war in ihm mächtig*; Andreas Hofer inspired Erwin H. Rainalter's *Der Sandwirt*; and the establishment of the trans-Atlantic cable furnished the idea for Hans Heuer's *Cyrus Field erobert die Welt*. The historical novel—e.g., Otto von Taube's *Die Metzgerpost*, and Kurt Eggers' *Herz im Osten*—seemed to retain much of its popularity. Regional fiction included *Die Schenke zur ewigen Liebe*, by Walther Vollmer; *Der Zwingherr*, by Peter Dörfler; and *Das Schutzengelhaus*, by Richard Billinger. Literature of "blood and soil"—for which German critics have found the term "Blubo"—is typified by Hein Kruse's *Der Gefallene ruft*. Among the novels by better known authors are: Otto Flake's *Anselm und Verena*; Enrica von Handel-Marzett's *Die Waxenbergerin*; Ruth Schaumann's *Der Major*; Clara Viebig's *Der Vielgeliebte und die Vielgehasste*; Jakob Schaffner's *Larissa*; Ernst Zahn's *Der Weg hinauf*; Vicki Baum's *Das grosse 1×1*; and Josef Ponten's *Die Väter zogen aus*. A selection from other published fiction includes: Kurt Schubert's *Märten von Borwiz*; Mechtilde Lichnowsky's *Delaide*; Carl Haensel's *Echo des Herzens*; Alexander Castell's *Begegnung mit einem bösen Tier*; Siegfried Trebitsch's *Helmkehr zum Ich*; Georg Rendl's *Wartendes Land*; Emil Strauss's *Der Riesenspielzeug*; Hans Gumprecht's *Der Baum der Erkenntnis*; Fanny Wibmer-Pedit's *Ritter Florian Waldauf*; Juliana von Stockhausen's *Paul und Nanna*; Thomas Quint's *Der Weg nach Haus*; Elizabeth Langgasser *Der Gang durch das Ried*.

Shorter Fiction. Not a few veteran literary artists profess to believe that the novel is not des-

tined to retain its preëminence as a form of expression. It seems improbable, however, that the *Novelle* will ever lose its charm for German readers, though it appears often to baffle translation into other languages. The finest work of the past year—less fruitful than some—includes Hermann Hesse's *Fabulierbuch* and Ernst Eichert's *Hirtennovelle*. Hans Grimm, one of the most popular German fiction writers, is represented by a characteristic story, *Luderitzland*. Jakob Kneip has published *Hunsrückweihnacht*; Anton Galiele is the author of *Mitsommer*.

Drama and Poetry. Mediocre political dramas testified to the low estate to which the German theatre has fallen. The *Schiller Preis* was not awarded during 1935. Jewish actors were constrained to perform only for their own cultural community, and their achievement cannot be recorded here. Among the plays having some literary merit the following were notable: Max Mell's *Das Spiel von den deutschen Ahnen*; Josef Buchhorn's *Heinrich von Kleist*; and Friedrich Wolf's *Florisdorf*. Lyric verse was comparatively plentiful. Hermann Stehr's beautiful *Lebensbuch* and Alexander Lernet-Halenia's distinguished *Die goldene Horde* possibly head the list. Will Vesper issued his collected poems under the title, *Kranz des Lebens*. Richard Billinger's latest volume is *Nachtwache*. Josef Weinheber's *Adel und Untergang*, Edward Stucken's *Die Insel Perditia*; Johannes Linke's *Der Baum*, and Karl Rauch's *Feldgraue Ernte* all attracted attention. Hans Arens edited an anthology, *Frühe deutsche Lyrik*. The year provided numerous excellent versions of classical poets, notably Dante and Pindar. Nothing impressive was introduced in the realm of musical drama.

Politics and Economics. Solid treatises in the social sciences were few in number, attention being given rather to political issues interpreted varying by writers living inside and outside Germany. Eugen Diesel's *Ring um Europa* is a sequence of essays by an intelligent observer. Peter Dehen's *Sinn und Ende der Arbeitslosigkeit* offers a new theory of technological unemployment. *Kurzgefasste Volkswirtschaftslehre* and *Volkswirtschaftslehre* are the latest works of Adolf Weber. The most important international development of 1935 forms the topic of Fritz Klein's *Warum Krieg um Absinien?* A prominent Nazi exile, Otto Strasser, recounted his experiences in *Die deutsche Bartholomäusnacht*. Georgi Dimitroff's *Aufzeichnungen* form a noteworthy addendum to Communist literature. Otto Meissner and Georg Kaisenberg issued a study of newer German law, *Staats- und Verwaltungsrecht im Dritten Reich*. Other literature pro and contra includes August Winnig's *Heimkehr*; Emil Meyren's *Deutschland und deutsches Reich*; Adolf Spamer's *Die deutsche Volkskunde*; and Waldemar Gurian's *Bolschewismus als Weltgefahr*. Carl Hensel and Richard Strahl supply an *Aussenpolitisches ABC*. The following treatises concern themselves with more philosophical aspects of the modern German state: Hans Heyse's *Idee und Existenz*; Ernst Zenker's *Religion und Kult der Urarier*; Walther Pembaur's *Nationalismus und Ethik*; and Werner Sombart's *Deutscher Sozialismus im Urteil der Presse*. A considerable number of brochures dealt with problems incidental to rearmament and military training.

Biography. An unusually large number of good biographies have appeared. Perhaps existing social conditions have inculcated regard for personalities as the instruments of historical destiny, or perhaps a taste for reality as distinguished from fiction has

Schulte, records a missionary's aeroplane voyage in Africa.

General Works. The new encyclopedias were brought to completion:—*Der grosse Herder* and *Das kluge Alphabet*, both of which feature modern book-making technique. The *Handbuch der Kulturgeschichte*, which H. Kindermann is editing, was enriched by a section dealing with aspects of the 18th century, by Emil Ermatinger. *Ekklesia*, the projected compendium of Christian faiths, had added a study of the Scandinavian churches. *Die Deutsche Literatur in Entwicklungsreihen* now includes two studies of literature in the baroque period.

Translation. Generous attention was accorded books translated from other languages. Two notable fiction successes, Hervey Allen's *Anthony Adverse* and James Hilton's *Goodbye, Mr. Chips*, were made available to German readers. Emmet Lavry's *First Legion* was successful in Viennese and other theatres. Other authors introduced to the German public include Pearl Buck and Kristmann Gudmonson. Critics gave more than usual notice to Polish books. High praise was accorded Nora Wain's *House of Exile*.

GERMANY. A former federal republic, transformed into a unified and centralized state by the National Socialist revolution commencing in 1933 Capital, Berlin.

Area and Population. The area and population of Germany at the censuses of 1925 and 1933, by the former constituent republics, are shown in the accompanying table.

GERMANY: AREA AND POPULATION BY STATES

States	Area, English sq miles	Population, June 16, 1925	Population, June 10, 1933
Prussia ^a	113,042	38,175,989	39,861,360
Bavaria	29,343	7,379,594	7,684,645
Saxony	5,787	4,994,281	5,196,531
Württemberg	7,532	2,580,235	2,695,942
Baden	5,819	2,312,462	2,413,324
Thuringia	4,541	1,607,339	1,659,510
Hesse	2,970	1,347,279	1,426,847
Hamburg	160	1,152,523	1,214,097
Mecklenburg ^b	6,199	784,314	805,189
Oldenburg	2,481	545,172	574,471
Brunswick	1,419	501,875	512,868
Anhalt	893	351,045	364,371
Bremen	99	338,846	371,951
Lippe	469	163,648	175,520
Lubeck	115	127,971	136,403
Schaumburg-Lippe	131	48,046	50,023
Total ^c	181,000	62,410,619	65,143,052

^a Including Waldeck. ^b Mecklenburg-Schwerin and Mecklenburg-Strelitz were united Jan 1, 1934 ^c Excluding the Saar (area, 738 square miles, population, 826,000 in 1933), which was restored to Germany Mar. 1, 1935.

The estimated population on Jan. 1, 1935, was 65,804,000. Living births in 1934 numbered 1,181,179 (956,974 in 1933), deaths, 716,865 (729,501); marriages, 731,431 (631,152). There was an unprecedented movement of population within Germany during 1934. A total of 1,790,000 persons moved from smaller communities to cities of over 50,000 population, while another 1,870,000 moved from large cities to rural districts. The cities of more than 100,000 population received 1,430,000 new residents in 1934 but lost 1,510,000 others. The population of Berlin declined from 4,242,501 at the census of June 16, 1933, to 4,241,000 (estimated) on Jan. 1, 1935. Populations of other leading German cities in 1933 were: Hamburg, 1,129,307; Cologne, 756,605; Munich, 735,388; Leipzig, 713,470; Essen, 654,461; Dresden, 642,143; Breslau, 625,198; Frankfurt-on-Main, 555,857; Dortmund,

540,875; Düsseldorf, 498,600; Hanover, 443,920; Duisburg-Hamborn, 440,419; Stuttgart, 415,028; Nuremberg, 410,438; Wuppertal, 408,602. According to the 1933 census, Protestants comprised 62.7 per cent of the population, Catholics 32.5 per cent, Jews 0.7 per cent, adherents of other religions 4 per cent.

Education. Education is compulsory and the number of illiterates is negligible. Enrollment in elementary schools in 1931-32 was 7,590,073; in intermediate schools, 229,671; in vocational and trade schools, 1,752,941; in "gymnasien" and "realschulen," 786,691; in universities and advanced technical schools (1933-34), 99,304 and 20,936, respectively. The Hitler régime adopted the policy of drastically curtailing the number of students in universities and advanced technical institutions. The combined enrollment in the 23 universities was about 55,000 in the 1935 summer session (approximately 100,000 in the 1932 summer session) and the enrollment in the ten technical high schools was about 22,000 in 1935 (about 30,000 in 1932). The number of new students enrolled in the universities in the summer of 1932 was 20,000; in 1935, about 7000.

Agriculture, etc. Germany in 1934 had 50,438,000 acres of arable land, 20,199,000 acres of meadow and pasture, 1,881,000 acres of shrubs and orchards, and 31,630,000 acres of forests. The area and production of the chief crops in 1933 and 1934 is shown in the accompanying table from the U.S. *Foreign Commerce Yearbook, 1935*.

GERMAN CROPS: AREA AND PRODUCTION

Crop	Area ^a		Production ^b	
	1933	1934	1933	1934
Wheat	5,727	5,431	205,918	166,539
Rye	11,180	11,097	343,576	299,501
Barley	3,918	4,030	159,292	147,156
Oats	7,864	7,773	478,986	375,634
Spelt	280	257	5,898	5,271
Potatoes	7,139	7,183	1,619,320	1,718,865
Sugar beets	686	859	8,579 ^c	10,394 ^c
Beet sugar ^d			1,432 ^e	1,656 ^e
Fodder beets	2,043	2,088	30,717 ^c	33,805 ^c
Hay, alfalfa, and clover	18,647	18,508	32,836 ^c	26,424 ^c
Hops	24	24	14,977 ^c	14,427 ^c
Tobacco	30	30	64,890 ^c	66,358 ^c
Grapevines	178	180	47,512 ^f	119,533 ^f

^a Thousands of acres. ^b Thousands of units—bushels, except as indicated. ^c Unit, metric ton. ^d Seasons ended following year. ^e Unit, pound. ^f Unit, gallon of wine.

Livestock statistics for 1934, with the averages for 1921-25 in parentheses, were (in thousands): Cattle, 19,165 (16,877); sheep, 3482 (5610); horses, 3374 (3790); swine, 23,125 (16,192); goats, 2489 (4261). The value of meat and other livestock products in 1934-35 was estimated at 6,187,000,000 reichsmarks. The value of crops produced in the fiscal year 1934-35 was (in millions of reichsmarks): Wheat and spelt, 774; rye, 709; barley, 269; oats, 90; potatoes, 730; beet sugar, 589; hops, 36; tobacco, 35; grapevines, 183. Sea fisheries in 1933 produced 409,000 metric tons of fish, valued at 62,300,000 reichsmarks.

Mining and Manufacturing. The mineral and metallurgical production of Germany in 1934, with 1933 figures in parentheses, was (in 1000 metric tons): Coal, 125,011 (109,921); lignite, 127,257 (126,795); coke, 24,219 (21,154); briquets, 36,238 (34,929); iron ore, 4680 (2592); lead (smelter), 120 (116.6); copper (smelter), 52.6 (49.8); potash (K₂O), 1220 (1026); pig iron, 8742 (5266); crude steel, 11,886 (7585); rolling-mill products, 8403 (5460). Rayon output in 1934 was about 81,570,000 lb. (72,311,000 in 1933); shipping tonnage

launched, 73,733 gross tons (42,195 in 1933). Net imports of raw cotton, including linters, were 881,000,000 lb. in 1934 and 1,043,000,000 lb. in 1933.

The 1935 output of pig iron and ferro-alloys, including the Saar after March 1, was 12,530,000 metric tons; steel ingots and castings, 16,104,000 metric tons; coal, 143,016,000 metric tons.

The value of mineral and industrial production in 1933 was (in million reichsmarks): Coal, 1169; lignite, 316; coke, 316; coal briquets, 79; lignite briquets, 310; iron ore, 21; lead, 4; copper, 13; potash, 120; pig iron, 282; crude steel, 566; rolling-mill products, 879; rayon, 139 (sales only). According to the industrial census of 1933, 8,999,000 persons were employed in mining and manufacturing, compared with 10,871,000 in 1925. There were 1,897,929 industrial establishments, the chief lines being iron and steel, chemicals, textiles, beet sugar, potash, glass, porcelain, earthenware, electrical goods, beer, tobacco products, toys, musical instruments, footwear, etc. For economic conditions in 1935, see *History*.

Foreign Trade. The trend of German foreign trade during the period 1929 to 1935 is shown in the accompanying table.

GERMAN FOREIGN TRADE, 1929-35

Year	Imports for consumption		Exports of German products		Excess of imports (—) or exports (+)
	value ^a	weight ^b	value ^a	weight ^b	
1929 . . .	13,447	65,724	13,483	68,283 ^c	+ 36
1930	10,393	56,052	12,036	62,576 ^c	+1,643
1931	6,727	40,136	9,599	56,391 ^c	+2,872
1932	4,666	32,624	5,739	42,237	+1,073
1933	4,204	34,834	4,871	41,172	+ 667
1934	4,451	43,709	4,167	44,504	— 284
1935	4,159	.	4,270	.....	+ 111

^a Millions of reichsmarks ^b Thousands of long tons
^c Inclusive of deliveries on account of reparations

Of the total German imports for consumption the United States supplied 8.4 per cent in 1934 (11.5 per cent in 1933); the Netherlands, 5.9 (5.5); the Soviet Union, 4.7 (4.6); United Kingdom, 4.6 (5.7); France, 4 (4.4); and Czechoslovakia, 3.6 (2.9). The Netherlands purchased 11.6 per cent of the 1934 exports (12.7 in 1933), United Kingdom, 9.2 (8.3); France, 6.8 (8.1); United States, 3.8 (5.0); Czechoslovakia, 3.6 (3.3).

The value of the principal 1934 imports was (in 1000 old U. S. gold dollars): Raw or washed wool, 60,596; fruits and nuts, 59,463; cotton linters, 57,139; oilseeds, 52,378; iron and steel, 50,727; chemicals and allied products, 36,648; mineral oils, 32,599; timber and lumber, 32,065. The value of the leading exports of German products for 1934 was (in 1000 old U. S. gold dollars): Iron and steel, 143,934; machinery other than electric, 102,696; chemicals and drugs, 100,265; coal, coke, and briquets, 77,731; paints and varnishes, 49,069; electric machinery, 47,413.

United States figures for 1935 showed imports from Germany of \$77,741,474 (\$68,805,488 in 1934) and exports to Germany of \$91,662,317 (\$108,738,464 in 1934).

Finance. Actual returns for the Reich's ordinary budget covering the year ended Mar. 31, 1935, showed receipts of 7,806,500,000 reichsmarks, including loans of 1,040,900,000 reichsmarks, and expenditures of 8,220,900,000 reichsmarks. The deficit totaled 1,119,000,000 marks, taking credit operations into account. For 1933-34 receipts and expenditures were 6,024,000,000 reichsmarks (including loans of 92,000,000) and 6,270,000,000 reichsmarks, respectively. For 1932-33 they were

7,377,000,000 and 7,940,000,000 reichsmarks, respectively. The ordinary budget returns for 1933-34 and 1934-35 give only a partial picture of the financial situation, as no complete official figures were available covering the extraordinary receipts and expenditures, including heavy expenditures for rearmament and reemployment.

According to the Minister of Finance, the Reich public debt on July 1, 1935, amounted to 13,200,000,000 reichsmarks, as against 12,200,000,000 reichsmarks on Jan. 1, 1933. The long-term debt on July 1, 1935, was 10,300,000,000 and the short-term debt 2,900,000,000 reichsmarks. The Minister said that there were approximately 5,000,000,000 reichsmarks of outstanding obligations not included in the 13,200,000,000 total, representing chiefly employment bills and other short-term Treasury paper used to finance employment and national defense projects. The reichsmark had a par value of \$0.2382 prior to the devaluation of the dollar in January, 1934, and a par value of \$0.4033 after that. The average exchange value was \$0.2375 in 1932, \$0.3052 in 1933, \$0.3938 in 1934, and \$0.4026 in 1935.

Communications. The German state railway system in 1933 had 33,486 miles of line and private lines about 2800 miles. During 1933 the state lines carried 1,240,000,000 passengers and 308,100,000 metric tons of freight, earning gross receipts of 2,921,000,000 reichsmarks. Comparative figures for 1929 were: Passengers, 1,980,000,000; freight, 485,900,000 metric tons; gross receipts, 5,354,000,000 reichsmarks. In 1932 highways extended about 217,500 miles. An additional 1252 miles of highway were under construction in 1935. Civil aeroplanes in 1934 flew about 8,078,000 miles and carried 130,000 passengers. The German merchant marine on June 30, 1935, had a gross tonnage of 3,703,700 (3,691,000 on June 30, 1934). The net tonnage of vessels entering German ports with cargo in 1934 was 22,896,000 (24,516,000 in 1933).

Government. While the Weimar (republican) Constitution of Aug. 11, 1919, was not formally abrogated under the Nazi régime, it was nullified by the Enabling Act of Mar. 24, 1933, by which the Reichstag authorized the Cabinet to legislate by decree even if such legislation was not in accord with the Weimar Constitution. Under the Enabling Act, Adolf Hitler established a personal dictatorship, substituting the so-called "leadership principle" for the democratic and liberal governmental system of the former republic. All activities of the country were placed under the control and guidance of Herr Hitler, acting in the dual capacity of Chancellor and head of the National Socialist (Nazi) Party. Upon the death of President von Hindenburg on Aug. 2, 1934, Chancellor Hitler assumed the functions of both Chancellor and President, under the title of Leader (Fuehrer) and Chancellor (Reichskanzler). As Leader and Chancellor, Hitler was commander-in-chief of the army, appointed all officials of both the government and the Nazi party, and exercised in conjunction with the cabinet unlimited powers of legislation. The Reichstag retained advisory powers only. The dictator during 1933 and 1934 established the precedent of submitting important questions to a national referendum. The rights of the former Federal States were abolished by the decree of Feb. 1, 1934, and the Reich Cabinet assumed full powers over State and local activities. All political parties were dissolved, with the exception of the National Socialist Party, and the formation of new political organizations was prohibited.

The members of Herr Hitler's Cabinet, formed Jan. 30, 1933, were, at the beginning of 1935: Minister of Interior, Dr. Wilhelm Frick; Foreign Affairs, Count Konstantin von Neurath; Defense, Gen. Werner von Blomberg; Finance, Count Ludwig Schwerin von Krosigk; Food and Agriculture, Dr. Walther Darré; Economic Affairs, Dr. Hjalmar Schacht (appointed Aug. 2, 1934); Labor, Franz Seldte; Communications and Posts, Baron Paul von Eltz-Rübenach; Justice, Dr. Franz Gurtner; Learning and Education, Dr. Bernhard Rust; National Enlightenment and Propaganda, Dr. Joseph Goebbels; Ministers without Portfolio, Rudolf Hess, Hans Kerrl, and Dr. Hans Frank (appointed Dec. 19, 1934).

HISTORY

Greatly strengthened by his striking successes in the field of diplomacy and by his audacious strokes at the "chains" placed upon Germany by the Versailles Treaty, Chancellor Hitler and his Nazi cohorts emerged from the eventful year 1935 more firmly entrenched in power than ever before. The authoritarian state had extended its sway into new fields. The campaign to liquidate the Jews as a factor in German national life had been carried steadily forward. Unemployment had been further reduced. The temporary stimulus to economic activity provided by the rearmament and public works programmes, combined with the national pride and enthusiasm aroused by the restoration of conscription, had calmed somewhat unrest due to economic causes.

Yet the prospects of National Socialist Germany were not entirely favorable. The economic and financial situation at the end of 1935 aroused grave forebodings in German business circles. The anti-Jewish measures provoked repercussions at home and abroad which added to the Reich's economic difficulties. The stubborn opposition of sections of the Protestant and Catholic churches to Nazi efforts at "coordination" of religion with the state afforded a rallying ground for all non-Nazi elements. Serious conflicts persisted between the army and the Nazi party over control of the new state and between radical and conservative elements within the National Socialist ranks over the form and extent of economic reorganization of the Reich. These fundamental cleavages, repeatedly evidenced in mild form during the year, threatened to precipitate at any time a serious internal crisis similar to that which produced Hitler's "blood purge" of June, 1934.

Nazi Control Extended. Commencing with the decree of January 1 amalgamating the Ministries of Justice in the several States with the Reich Ministry of Justice, the Hitler régime steadily extended its centralized control over previously uncoordinated spheres of activity. The decree of January 1 gave the Reich a unified system of legal procedure and law courts. A law of January 30 brought all local governments, municipalities, and villages under direct Nazi supervision. It provided that a Nazi representative approved by Rudolf Hess, Hitler's deputy in charge of the party, should be attached to every mayor's office, with the right of participating in all deliberations. Early in the month Dr. Wilhelm Frick, the Minister of Interior, also announced that effective January 30 the existing States would be abolished and replaced by 22 administrative districts or Provinces, with appointive governors. By eliminating local sectionalism and traditions, this step was calculated to unify the nation more closely and ex-

tend the authority of the central government. However, the annual celebration of Hitler's accession to power at which this transformation was to take place was called off for unexplained reasons and up to the end of the year Dr. Frick's proposals had not been put into effect.

The restoration of conscription, announced by Chancellor Hitler on March 16, and the accompanying provision for compulsory service in the labor camps, were considered important steps towards the welding of German unity under Nazi dominance. On April 25 new decrees aimed at the non-Nazi press, and particularly at non-Aryan newspaper owners, tended to give the official Nazi organs a monopoly of the newspaper business. Nazi control over industry and labor was solidified by the nation-wide elections which took place on May 1 in industrial and business establishments. Councils to represent the workers in their relations with the managers or "leaders" were chosen from lists approved by the Nazi Labor Front.

The aristocratic student fraternities in the universities were the next to undergo "liquidation." They had not shown proper respect for the Nazi régime, even going so far as to discuss in humorous vein the question of whether Hitler ate asparagus with fork or fingers. On October 18 the last of the fraternities was formally dissolved. The remnants of the once powerful Stahlhelm, an organization of World War veterans which formerly constituted a serious rival to the National Socialist party, was dissolved by a decree of November 7. Meanwhile the dissolution of smaller and less spectacular non-Nazi organizations proceeded on a large scale.

Protestant Opposition. It was in the effort to "coördinate" the churches that the Nazis met their chief setback. The conflict between the state and the churches, which had been almost continuous since the establishment of the Nazi régime in January, 1933, assumed a more violent form in 1935. After several months of relative quiescence, the conflict between the official Reich Church under Bishop Ludwig Mueller and the Protestant Opposition pastors broke out again in March. The Opposition pastors issued a vigorous manifesto denouncing the officially inspired German Christian movement and even the totalitarian state. They declared the Nazi creed based on "a racial and nationalistic view of life" constituted a "deadly danger." The manifesto was read from numerous pulpits despite objections of the secret police and a reduction of the churches' share of the tax in Prussia. On March 17 some 700 pastors were placed under temporary arrest in their homes to prevent them from reading the proclamation.

Further friction led Reich Minister of Interior Frick, who had been entrusted by Hitler with the task of "supervising the church conflict" to establish on June 26 a committee to settle legal disputes arising out of the religious quarrel. It was empowered to decide "whether the measures taken in the Evangelical Church since May 1, 1933, are legal or illegal." This was designed to block legal suits for damages by suspended pastors and church officials, many of whom had won their cases.

On July 18 Hitler indirectly eliminated Reich Bishop Mueller as the centre of the Protestant church controversy by appointing Hans Kerrl as Reich Minister for Church Affairs, with complete authority over both Protestant and Catholic churches. Meanwhile the indignation of Protestants and Catholics alike had been roused to a higher

pitch by the semi-official support given the pagan German Faith Movement at a time when rallies and public religious discussions by Lutherans and Catholics were discouraged if not forbidden. Union of the Opposition Lutheran and Calvinist groups in South Germany and of the United Church in the north was brought about at a meeting of Opposition pastors at Augsburg on June 5 and 6. They drew up another manifesto vigorously defending religious freedom and liberty of ecclesiastical instruction, which was read at a great rally in Berlin on July 21. The banishment of pastors from their parishes and other coercive acts by the secret police failed to daunt the Opposition leaders.

By the decrees of September 24 and October 3 Herr Kerrl was authorized "to issue decrees with the force of law, in order to restore order in the German Evangelical Church and in the Evangelical territorial churches." Under these laws Herr Kerrl on October 14 appointed a Reich Church Directorate of eight members to direct and represent the German Evangelical Church. Its extensive powers included the right to appoint and dismiss the officials of the church. In an effort to secure Opposition acceptance of government control, the Minister named to the directorate men who were either directly associated with, or sympathetic to, the Opposition group. As this action constituted open repudiation by the government of Reich Bishop Mueller and the "leadership doctrine" in church affairs, some Opposition groups were disposed to accept the new order as a compromise.

The directorate on October 17 proclaimed its support of "the National Socialist nation—a creation on the basis of race, blood, and soil." On the other hand it reaffirmed that Christ was the "Messiah and Savior of all nations and races" and His Gospel was "the inviolable foundation of the German Evangelical Church." The Reich government soon demonstrated, however, that it had not changed its determination to crush all opposition to its totalitarian views. In November the secret police closed two new independent theological seminaries of the Confessional Synods. The church conflict immediately flared up anew and Herr Kerrl then resorted to extreme dictatorial measures. On November 29 the secret police searched the Berlin headquarters of the Confessional Brotherhood and confiscated the funds of the Opposition churches and synods. When on December 1 the Opposition leaders read declarations in their churches accusing the government of aiding the introduction of heresy into German Protestant teachings, Kerrl prohibited "church associations or groups" from exercising executive or administrative functions, on pain of dissolution. This decree, which if enforced meant the complete crushing of the Opposition pastors and their movement, was met by open defiance on the part of the Confessional groups. They performed executive and administrative functions in direct violation of the decree, but at the cost of arrests, banishment from their parishes, and loss of their salaries. As the year closed their resistance was seriously weakened by the defection of Dr. August Marahrens, Bishop of Hanover and Presiding Bishop of the Confessional Church, who on December 13 voted to cooperate with Herr Kerrl and his directorate in an effort to restore peace and unity among the Protestant groups.

The Conflict with Catholicism. While realizing the impossibility of "coordinating" the Catholic

Church with the Hitler régime, the Nazis followed a policy of restricting Catholic activities, of discrediting the church with the German people, and of extending their control over Catholic youth. The Catholics held that these attacks upon them were in contravention of the Concordat between the Hitler Government and the Vatican, effective Sept. 10, 1933, which recognized as legitimate Catholic organizations having a religious objective. During 1935 the Catholic youth groups were increasingly molested by the Hitler youth organizations. The authorities also curtailed the activities of the Catholic groups and by July, 1935, the latter were forbidden to engage in sport or in social and educational programmes. The antagonism aroused among the Catholics was increased by the anti-Christian trend within the Hitler Youth movement and the support given the neo-pagan movement by high state officials.

Alfred Rosenberg's anti-Christian activities as cultural dictator of the Reich were particularly obnoxious to the Catholics. The announcement that he proposed to speak in Münster led the Catholic Bishop of that diocese early in July to protest in a pastoral letter that the speech would be an "unbearable provocation" to the Catholic public and an insult to their "most sacred religious convictions." Rosenberg spoke in Münster nevertheless. His denunciation of the Bishop's protest as an incitement of Catholics against the government was reiterated by Minister of Interior Frick. Herr Frick declared all Reich laws, including the sterilization and foreign exchange measures, were binding upon Catholics and ordered prosecution of those opposing their enforcement. He warned that the Catholic occupational and youth groups were "often active in fields which the Nazi state must reserve for itself."

On July 16 the Vatican formally protested against alleged violations of the Concordat. It charged that the sterilization of Catholics, interference with Catholic lay organizations, and censorship of the Catholic press were all violations of the Reich's obligations. Two days later occurred Herr Kerrl's appointment as Minister of Church Affairs, with control over both the Protestant and Catholic churches. At the same time General Goering, with Hitler's approval, issued a decree ordering the authorities "to employ all their legal weapons against members of the Catholic clergy who falsely employ the authority of their spiritual position for political purposes." He charged that priests had openly denounced Reich institutions and laws from the pulpit. The Nazis, he declared, "allow the Catholic as well as the Protestant church complete liberty in faith and teaching," but that politically only the National Socialist idea of the state was possible in Germany. Another decree of July 26 restricted the activities of all religious organizations.

This decree was followed by a wave of attacks upon Catholic lay organizations and the arrest or gagging of the more outspoken among the priesthood. The prosecution of priests, monks, and nuns for the smuggling of foreign exchange out of the Reich in violation of the exchange control laws continued throughout the year. Many of them were sentenced to long prison terms. The total fines imposed upon Catholic orders for such smuggling were estimated at about 5,000,000 marks. The Nazi press gave these trials wide publicity in an effort to discredit Catholic priests and leaders. On November 23 the secret police raided the offices of the Catholic Bishop of Berlin, seized



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THE SAAR RESTORED TO GERMANY

Chancellor Adolf Hitler acclaimed at Saarbrücken, as the territory was transferred from international to Reich control, Mar. 1, 1935



Exclusive from European

THE THIRD REICH REARMS

The new German army displays its proficiency in manoeuvres before Hitler and the Nazi convention at Nuremberg, Sept. 16, 1935



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LEADERS OF THE GERMAN MILITARY MACHINE

Left to right: Gen. Werner von Blomberg, Minister of War and commander-in-chief of all armed forces; Gen. Hermann Goering, commander of the air forces; Gen. von Fritsch, commander of the army; Admiral Erich H. A. Raeder, commander of the navy; and Chancellor Hitler



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GEN ELEAZAR LÓPEZ CONTRERAS

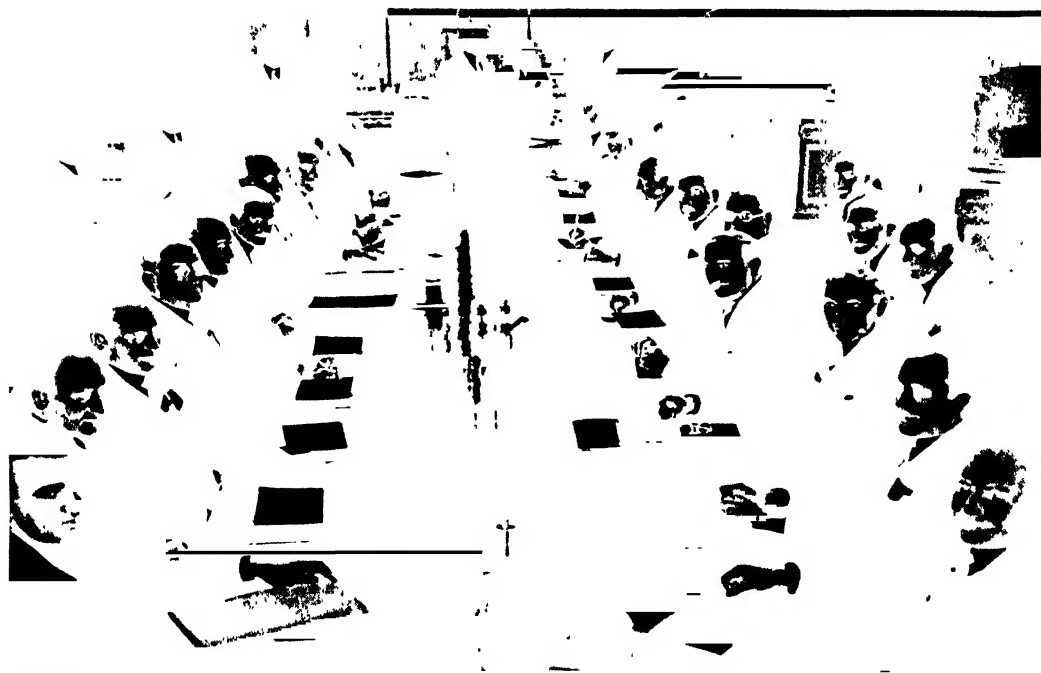
Provisional President of Venezuela, inaugurated
Dec 18, 1935



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DR JOSÉ A. BARNET y VINAGERAS

Provisional President of Cuba, inaugurated
Dec 13, 1935



Keystone

THE CHACO PEACE CONFERENCE

Representatives of Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, Uruguay, and the United States deliberating at Buenos Aires in effort to establish permanent Bolivian-Paraguayan peace

LATIN AMERICA

numerous documents, and took an attaché into protective custody. Thus the year closed with the struggle between the Reich and the Catholic Church assuming an ever more serious aspect.

Anti-Jewish Measures. Lacking the numbers and position of the Christian denominations in Germany, the Jews during 1935 felt the full force of the anti-Semitic sentiments obsessing Hitler and his associates. The highly discriminatory measures placed in operation during 1933 and 1934 were extended. Commencing July 15 a series of organized anti-Jewish riots occurred in Berlin. Jews were dragged from cafés and stores and beaten in the streets by Nazis led by uniformed Storm Troopers. The riots were preceded by inflammatory articles in the controlled Nazi press, inciting the people to action against the Jews. Julius Streicher of Nuremberg, most notorious of the Nazi Jew-baiters, made a number of anti-Jewish speeches in Berlin to large audiences. These developments led Dr. Hjalmar Schacht, Reich economic dictator, in a speech at Koenigsberg on August 18 to protest against illegal anti-Jewish measures on the ground that they endangered German trade relations, discouraged the tourist trade, and in general complicated the difficult economic problems of the Reich.

Nevertheless measures legalizing existing discriminations against the Jews and imposing new ones were adopted by the Sixth Nazi Party Congress at Nuremberg on September 10-16. So-called "pure" Jews were deprived of German citizenship, placed in a subordinate position as "state members," forbidden to marry or have extra-marital relations with Aryans or to employ Aryan domestic help under the age of 45, and forbidden to display the national flag. Jewish children also were segregated in separate schools. Executive decrees of November 15 amplified and in some respects modified the Nuremberg anti-Jewish decrees. These measures apparently aimed at the assimilation into the German population of persons of mixed Jewish and Aryan blood and the complete eradication of unmixed Jews and 75 per cent Jews. The economic position of the latter was made increasingly difficult by continuance of the boycott in many communities, with the tacit approval of the Reich authorities. See **Jews**.

The Nazi-Army Conflict. Although the effort of the Storm Troop leaders to win a controlling position in the regular army had been ended by the "purge" of June 30, 1934, friction between the Reichswehr and the Nazi party continued. Hitler's Special Guards, or Black Shirts, forming a kind of secret party police, had been greatly expanded and with the growth of their power the Special Guards had shown a desire to be placed on a par with the regular army in the matter of heavy armaments. On Jan. 3, 1935, a meeting of high army and navy officers and of Nazi leaders from all parts of Germany was suddenly and mysteriously convened in the Berlin Opera House. Even Nazi journalists were excluded, but according to later reports the meeting was for the purpose of clarifying relations between the army, the Special Guards, and the National Socialist party. Hitler, it was officially indicated, assured the army that its position as defender of the Reich and the sole bearer of arms was unchallenged, thus relegating the Special Guards and the remnants of the Storm Troops to a secondary position. At the same time he asserted the

party's complete mastery over political affairs of the Reich.

Subsequent developments confirmed the army's victory over the party military formations. The reintroduction of military conscription on March 16 in place of the small professional army authorized by the Versailles Treaty gave the army the task of creating the new German military machine. It was predicted that the exercise of this function eventually would lead the army to encroach to a vital degree upon the National Socialist party's political control. The new army law of May 21 provided for one year's active training of all able-bodied non-Jewish Germans between the ages of 18 and 45. After his year in the army, during which he owed undivided loyalty to his military superiors, the conscript passed into the Reserve until reaching the age of 35, when he became a member of the Landwehr. During all this period the army retained certain supervisory powers over the conscript.

A decree of November 28 established a trained reserve, consisting of all men not actually serving in the army, who were to be kept at a high level of efficiency through annual training. On December 21 the army won a still more important victory over the party when orders were issued by Gen. Werner von Blomberg, the chief of staff, for the incorporation of all men who passed through the army in a nonpolitical "Soldiers' League." The Soldiers' League thus took the place of the Stahlhelm and various other veterans' organizations which had been suppressed by the government. It placed virtually the whole of the German male population under the army's control, with the explicit agreement of Chancellor Hitler. Gen. Werner von Fritsch, commander-in-chief of the army, was named head of the Soldiers' League; he was responsible for his conduct of the organization to the chief of staff and not to the National Socialist party. The general staff, it should be mentioned, had been reconstituted on October 15, thereby abrogating another provision of the Versailles Treaty. Likewise affecting the army-party relations was the adoption by the law of Sept. 15, 1935, of the swastika as the official Reich and national flag. The black, white, and red colors of the former empire were retained for decorative purposes.

Unrest Reported. In addition to the opposition of Protestants and Catholics to the totalitarian tendencies of the state, evidences increased towards the end of the year that Social Democrats, Communists, and other elements suppressed by the Nazis were carrying on an active underground propaganda against the régime. The clue to the extent of this activity was afforded by numerous mass trials of Marxist and others reported in the Nazi press. The food shortage and rise in prices of staples accentuated the unrest. Foreign travelers reported that grumbling at one feature or another of Nazi rule was fairly widespread, but it was not believed that this discontent had assumed a really critical form.

Economic Trends. The economic situation during 1935 reflected the continuance of the factors which affected the development of Germany during the preceding year (see 1934 YEAR BOOK, p. 273). Industrial activity was confined largely to the heavy industries involved in the government's programme of rearmament and public works. The consumer goods industries lagged behind, partly on account of low purchasing power, which was further depressed by the rise in prices. Neverthe-

less it was officially estimated that the quantity of industrial output during 1935 was 95 to 96 per cent of the peak output of 1928, compared with a 1934 production which was 83 per cent of the 1928 level. The value of the 1935 industrial production increased about 500,000,000 marks over that of 1934. As in 1933 and 1934, government expenditures continued in 1935 as the principal stimulus to industry, representing more than 75 per cent of the total investments (about 70 per cent in 1934). The average number of unemployed was reported at 2,146,935 for 1935, against 2,657,711 in 1934 and 5,579,858 in 1932. The figure for Dec. 31, 1935, however, was but 97,000 lower than that for Dec. 31, 1934.

The Reich's foreign credit reached a new low level, with its most desirable obligations—the Dawes and Young Plan bonds—bringing 37 and 27, respectively, in New York toward the end of the year. Unable to borrow abroad, Germany undertook to finance needed imports of raw materials and food by forcing a favorable balance of trade. A subsidy scheme, placed in effect in June, enabled exporters to sell in foreign markets below cost, if necessary. Funds for these subsidies were obtained by a levy on German industries, estimated at 7 per cent of the annual turnover. Dr. Hjalmar Schacht, the Reich economic dictator, also encouraged exports by ordering the restriction of public contracts to firms with successful export businesses.

Although the 1935 foreign trade balance was favorable by 111,000,000 marks, against an unfavorable balance of 284,000,000 marks in 1934, the balance of foreign payments in general showed signs of further deterioration. The accumulated commercial indebtedness of Germany to other European countries was estimated at 500,000,000 marks at the close of 1935, having shown little decrease during the year.

Another source of weakness to the Nazi régime was the growing difficulty of short-term financing of expenditures, which accompanied the rapid growth of the public debt. This made it necessary for the government to monopolize all capital resources in the interest of public credit and of its successive consolidation loans. By the decree of October 18 all State banks were placed under Dr. Schacht's direct control. The gold reserves rose from 80,000,000 marks in January, 1935, to 95,000,000 in July and August, and then declined to 82,000,000 marks in December. The gold cover for the outstanding note circulation on November 23 was only 2.46 per cent. The heavy depreciation of Reichsbank notes in most European financial centres led the government on December 1 to prohibit the reimportation of marks circulating abroad. The mark thus became a purely domestic currency, whose value was fixed by government decree rather than by its intrinsic worth.

Foreign Relations. In contrast with his lack of definite success in dealing with economic problems and religious difficulties at home, Hitler's foreign policy during 1935 was marked by successive resounding triumphs which greatly strengthened his prestige both at home and abroad. The first of these was the overwhelming victory of the Reich in the Saar plebiscite of January 13, followed by the reincorporation of the Saar in Germany on March 1 (see SAAR). Hitler then proceeded by unilateral action formally to scrap those provisions of the Versailles Treaty restricting German armaments. Secret rearmament had been under way since the advent of the Nazi régime,

but it was not until 1935 that the Versailles bonds were publicly repudiated. On March 11 the Fuehrer announced the existence of a substantial German air force and on March 16 he decreed the reintroduction of military conscription and the establishment of a German fighting machine of 12 corps and 36 divisions—between 550,000 and 600,000 men. Towards the end of April it was officially announced that the construction of submarines and other naval units were under way. Thenceforward the building and supplying of the new military, air, and naval machine went forward openly and at top speed.

The resurgence of German military power had profound repercussions upon the diplomatic alignment of Europe. It was the principal factor behind the Franco-Italian rapprochement of Jan. 7, 1935, the establishment of a united front against Germany by Britain, France, and Italy at the Stresa Conference on April 11-14, the Franco-Soviet mutual assistance pact signed May 2 and still awaiting ratification by the French Parliament at the end of the year, the conclusion of a similar pact between Czechoslovakia and the Soviet Union, and the feverish expansion of armaments by practically all of the European powers to meet the threat implicit in German rearmament.

By the extension of her system of alliances to include Italy and the Soviet Union, France completed the encirclement of Germany. But the ring around the Reich was far weaker than it appeared on paper because of mutual hostilities and conflicting interests among the allies. Taking clever advantage of these divisions, Hitler had detached Poland from France in 1934. In 1935 he drove a wedge between France and Britain by the Anglo-German naval treaty and the tension between Britain and Italy over Ethiopia completed the breakdown of the so-called Stresa front. With France rendered weak and ineffectual by factional strife and economic difficulties, Hitler was able to carry through successfully his bold repudiation of the Versailles Treaty in open defiance of France and her allies. He sidestepped all efforts to force him to recognize the *status quo* in Central and Eastern Europe where lay the regions of prospective German expansion mentioned in Hitler's biography, *Mein Kampf*.

Realizing that German rearmament was already far advanced, Britain and France at the beginning of 1935 initiated efforts to reach an agreement with Germany on the basis of the equality previously denied her. The British Foreign Secretary, Sir John Simon, arranged to visit Berlin on March 7 to discuss the matter. On March 4, however, there was published a British White Paper on imperial defense which stated that an increase in British armaments was necessary in view of military preparations in other countries, particularly in Germany. Angered by this implied refusal to recognize German arms equality, Hitler abruptly postponed his conference with Sir John Simon. On March 16 he suddenly announced the reintroduction of military conscription, causing a grave crisis in Europe. The French and Italian protest against this unilateral repudiation of the Versailles Treaty was brought before the League Council, which on April 16 adopted a resolution of censure upon Hitler's action. The latter on April 20 rejected the resolution "in the most resolute manner" and condemned this effort to pass judgment upon Germany.

Meanwhile the Simon-Hitler conversations had taken place in Berlin March 25-26. Hitler in-

formed Simon of his refusal to participate in the proposed multilateral pact guaranteeing the territorial *status quo* in Eastern Europe. Although favoring bilateral non-aggression pacts between the powers interested in Eastern Europe, he declined to sign such pacts with Lithuania or the Soviet Union. Hitler offered to accept a system of permanent and automatic arms supervision applying equally to all powers, but declared Germany would not return to the League of Nations until she obtained full "equality" with the other powers, including the restoration of some colonies. The Fuehrer further expounded his foreign policy in a speech to the Reichstag on May 21. He promised to fulfill the Locarno treaties of 1925 "as long as the other signatories uphold them," including acceptance of the demilitarization of the Rhineland. He further promised that he would respect all clauses of the Versailles Treaty, including the territorial provisions, except the military provisions which had just been repudiated.

Hitler in his Reichstag speech also renewed his previous bid to conservative elements in Europe to make the new German army a bulwark against communism. He aimed at the establishment of an anti-Soviet bloc including Poland, Finland, Hungary, and Italy, which, if British neutrality could be secured, might win the next European war. France's answer to this proposal was the signing of the Franco-Soviet pact of May 2. On June 18 the Reich scored a notable diplomatic triumph by concluding a naval agreement with Britain in which Hitler agreed to limit the proposed German fleet to 35 per cent of the British naval tonnage. By thus giving official recognition to Germany's violation of the naval clauses of the Versailles Treaty, Britain nullified the Stresa agreement for joint opposition to German rearmament.

With the weakening of France and the absorption of Britain and Italy in their quarrel over Ethiopia, Central Europe became the diplomatic battleground between Germany and the Soviet Union. The smaller States and combinations, such as the Little Entente, Balkan Entente, and Baltic Entente, were weighing the relative advantages of cooperation with the League of Nations, the Soviet Union, and the Reich. While waiting for the time when her full military power would attract powerful allies and enable her to pursue her aims in Central and Eastern Europe, Germany turned her attention to the most promising areas for immediate action, namely Memel, Danzig, the districts of Eupen and Malmédy in Belgium, Schleswig in Denmark, and Czechoslovakia. In all of these regions the activities of German minorities in favor of reincorporation in the Reich received powerful political and financial support from the Nazi régime.

Memel was the storm centre of this agitation during 1935. The conflict between the German minority in Memel and the Lithuanian Government, which assumed an acute form beginning in 1933, culminated in the mass trial of Memel Nazis at Kaunas on charges of conspiring to overthrow Lithuanian sovereignty. The verdicts, handed down on Mar. 25, 1935, aroused a storm of fury in the Reich. The agitation against Lithuania (q.v.), backed by the powerful Nazi propaganda machine, continued throughout the year. Concentrations of troops near the Lithuanian border and the more elaborate military preparations made in East Prussia than in the rest of Germany lent a menacing aspect to these developments. See MEMEL.

In Danzig (q.v.) the attempt of the Nazi government to amend the democratic constitution so as to coordinate the Free City more completely with National Socialist principles was checked by the failure to secure the necessary two-thirds majority in the Diet in the elections of April 7. This result, in a community overwhelmingly German, was viewed as a rebuff to Hitler and his Nazi movement. The victory in the Saar was followed by intensified Nazi propaganda in Eupen and Malmédy directed from the German city of Aix-la-Chapelle. The Nazis were reported to have resorted to terrorization of their opponents, leading the Belgian police to arrest a number of Hitlerite agitators. Nazi propaganda also made rapid headway among the German minority in Czechoslovakia (q.v.) under the leadership of Konrad Henlein. While Henlein professed loyalty to the Czechoslovak state and to democratic principles, it was believed that his Sudeten German party would eventually serve as a basis for Nazi territorial demands in the German-speaking regions of Czechoslovakia.

In Austria (q.v.), the absorption of which had been the chief aim of German policy in 1934, the Nazi movement remained relatively quiescent during 1935 under the threat of Italian intervention. The ousting of Colonel Emil Fey and other German sympathizers from the Austrian Cabinet in the autumn of 1935 further reduced Hitler's influence. For Nazi agitation in various other countries, see BELGIUM, ESTONIA, FINLAND, LATVIA, the NETHERLANDS, and SWEDEN under *History*. The officially inspired agitation for colonial possessions also gained momentum during the year and there were indications that the European powers might seek to satisfy this demand at the expense of Portugal.

See AUSTRIA, FRANCE, GREAT BRITAIN, HUNGARY, ITALY, POLAND, RUMANIA, SOUTH-WEST AFRICA, and YUGOSLAVIA under *History*; *PHILOSOPHY*.

GIANT TOAD CONTROL OF INSECTS. See ENTOMOLOGY, ECONOMIC.

GIBRALTAR. A British crown colony and fortified naval base. Area, 17½ sq. miles; total civilian population (Jan. 1, 1935, est.), 15,847 (of whom 14,790 were fixed residents) exclusive of some 1500 British subjects and 4500 aliens from the nearby Spanish town of La Linea who entered Gibraltar each day. In 1934, there were 13 government-aided elementary schools with 2687 students enrolled, and 4 secondary schools.

Trade. The principal trade was the supply of coal, fuel oil, and provisions to shipping, and the transit of cargo to Spain and Morocco. No land was available for agricultural development. Fishing was carried on by local boats for home consumption. Boat building, ship repairing, and the manufacture of tobacco were carried on. During 1934, 6316 ships aggregating 11,563,598 tons entered the port. The Admiralty harbor was 440 acres in extent and contained three graving docks.

Government. Revenue was derived mainly from import duties, the rent of government property, and port dues. In 1934, revenue amounted to £245,858; expenditure, £275,644. The colony was administered by a governor who was also the general officer commanding the garrison. He was aided by an executive council of seven members. Legislative power was vested in the governor. Governor in 1935, Gen. Sir C. H. Harington.

History. As one of the key defenses of the British Empire's sea lane to Egypt and India, Gibraltar

became the centre during 1935 of the intense British naval and military preparations carried out in the Mediterranean as a result of the development of the Anglo-Italian crisis over Ethiopia (q.v.). The British main fleet, transferred to the Mediterranean beginning in July, used Gibraltar as one of its principal bases. At the same time the garrison was heavily reinforced, extensive naval and air manoeuvres were carried out in the vicinity, and the civil population was trained in preparation for possible air and gas attacks. See GREAT BRITAIN and ITALY under *History*.

GILBERT AND ELLICE ISLANDS. A British colony in the mid-Pacific, comprising the Gilbert group (16 coral atolls) and Ellice group (9 coral atolls) and including the distant Ocean, Fanning, Christmas, and Washington islands. Total area, 200 sq. miles; total population (Jan. 1, 1935 estimate), 34,337 including 238 Europeans. The chief products for export were copra, and phosphate of lime (from Ocean Island). In the year ended June 30, 1934, imports were valued at £94,429; exports, £259,843; revenue, £45,359; expenditure, £53,299. The colony was administered by a resident commissioner (with headquarters on Ocean Island) under the British High Commissioner for the Western Pacific who resided in the Fiji Islands.

GILES, JILZ, HERBERT ALLEN. A British Orientalist who died at Cambridge, England, Feb. 13, 1935. Born on Dec. 8, 1845, he was educated at the Charterhouse School in London. He began his career by joining the consular service in 1867, became vice consul at Amoy, 1878; Pagoda Island, 1880; Shanghai, 1883; consul, Tamsui, 1885; and Ningpo, 1891. In 1893 he resigned from the service to devote his time to his monumental *Chinese-English Dictionary* on which he had begun to work in 1874. It was first published in fascicules in 1892, was revised and enlarged in 1912, and was awarded the Prix St. Julien of the Académie Française in 1911. In 1897 he became professor of Chinese at Cambridge University and retired in 1932.

Dr. Giles was the first lecturer of the Dean Lung Foundation at Columbia University in 1902, his lectures on *China and the Chinese* being issued later in book form, as were his Hibbert Lectures of 1914 *On Confucianism and Its Rivals*, issued in 1915. In 1904, the North China Branch of the Royal Asiatic Society elected him an honorary member and in 1917 he was elected an honorary fellow of the Asiatic Society of Bengal. The Royal Asiatic Society awarded him its Triennial Gold Medal in 1922—the first time granted for Chinese studies—and the President, Lord Chalmers, in presenting the award, said: "We ask you to accept it from us as a tribute to the ripe scholarship and literary insight with which, amid the exacting duties of an honorable career as Consul in China, you have garnered for us so abundant a harvest from over half a century's labor in the field of Chinese language, Chinese history, and Chinese literature." The following year he was decorated by the Chinese Government with the Order of Chia Ho, 2nd Class, with Grand Cordon, and in 1924, was elected to the French Academy.

Dr. Giles' many works include: *Chinese without a Teacher* (1872, 8th ed., 1922); *Colloquial Idioms* (1873); *Two Chinese Poems* (1873); *Chinese Sketches* (1876); *Handbook of the Swatow Dialect* (1877); *Glossary of Reference* (1878, 3d ed., 1900); *Historic China* (1882); *Gems of Chinese Literature* (1884, enlarged ed., 1922); *Chuang Tzu* (1889, 2d ed., 1925); *A Chinese Biographical Dictionary* (1897), which also received the Prix St.

Julien; *Chinese Poetry in English Verse* (1898, enlarged ed., 1923); *Elementary Chinese, The San Tsü Ching* (1900, 2d ed., 1923); *Introduction to the History of Chinese Pictorial Art* (1905, 2d ed., 1918); *Religions of Ancient China* (1905); *Chinese Fairy Tales* (1911); *China and the Manchus* (1912); *Adversaria Sinica* (1st series, 1914, 2d series, 1915); *Some Truths About Opium* (1923); *Chaos in China* (1924); *The Hsi Yuan Lu* (Chinese Instructions to Coroners) (1924); *Quips from a Chinese Jest-Book* (1925). Also, he contributed, "Arts, Language, Literature, and Religions of China," in conjunction with his son, Dr. Lionel Giles, to the *Encyclopædia Britannica* for 1912; the article, "China," to the *History of the Nations* (1913), and the article "China and the Chinese" written especially for children, to *St. George's Magazine*, 1912.

GILES, PETER. A British philologist, died at Cambridge, England, Sept. 17, 1935. He was born at Strichen, Aberdeen on Oct. 20, 1860, and educated at the University of Aberdeen and at Gonville and Caius College, Cambridge, and subsequently at the universities of Freiburg and Leipzig. In 1884 he was Browne Medalist, and the following year, Lightfoot Scholar and Whewell Scholar.

In 1887, Dr. Giles became associated with Cambridge University, first as a fellow of Gonville and Caius College and three years later as a fellow of and classical lecturer at Emmanuel College. In 1891 he became reader in and from 1911 master of comparative philology at the College, a position he held for over 40 years. From 1919 to 1921 he served as vice chancellor of the University, and as a member of the statutory commission from 1923 to 1927. He was the commencement day speaker at Radcliffe College, Cambridge, Mass., in 1927.

As an educator and teacher, Professor Giles had an international reputation, and his philological and historical studies won for him an honored place in the world of research. He was a frequent contributor on philological subjects to the *Proceedings and Transactions* of the Cambridge Philological Society, the *Classical Review*, *Historical Review*, etc., and wrote articles on the alphabet, Greek Language, and philological subjects for the 11th edition of the *Encyclopædia Britannica*, as well as contributions to *Hastings' Dictionary of Religion and Ethics*. He supplied the chapters on "Languages" in *Whitley's Companion to Greek Studies* (with the late R. A. Nell) and *Sandys's Companion to Latin Studies*; "The Earliest Scottish Literature" in the *Cambridge History of English Literature*, vol. ii; "The Aryans" in the *Cambridge History of India*, vol. i; "Peoples of Asia Minor and Europe," two chapters in the *Cambridge Ancient History*, vol. ii; and the article "Philology" (in part), in *Chambers's Encyclopædia* (1926). He also wrote the standard English textbook, *A Short Manual of Comparative Philology* (1895, 1901; German ed., 1896), a new edition of which was in the course of preparation at his death.

GILLETT, FREDERICK HUNTINGTON. An American ex-Congressman and ex-Senator, died at Springfield, Mass., July 31, 1935. He was born in Westfield, Mass., Oct. 16, 1851, and was graduated from Amherst College in 1874 and Harvard Law School in 1877, being admitted to the bar in that year. He began the practice of law at Springfield, but soon turned to politics, and in 1879 became an Assistant Attorney General for Massachusetts. Upon the expiration of his term in 1882, he resumed his law practice, but politics again claimed him and

he became a member of the Massachusetts House of Representatives in 1890 and 1891.

In 1893, he was elected to the 53d Congress and began a long service in the House of Representatives. During his tenure of office, he served on many important committees, including that of Appropriations, becoming the ranking Republican member, Judiciary, Foreign Service, and Civil Service Reform. In 1914, he favored the Panama Canal Tolls Repeal Bill and was opposed to the Government's Mexican policy. While serving on the Appropriations committee during the World War, he cooperated with the Administration and voted for funds for the War, but fought against any measure that threatened to give to the President further power. During this period he was minority floor leader and when the Republican Party returned to power in 1919 was elected Speaker of the 66th Congress, and subsequently of the 67th and 68th Congresses.

Being prevailed upon to run for Senator, he resigned from the House in 1925, and was elected to the Senate for the term beginning Mar. 4, 1925, and ending Mar. 3, 1931. While serving in the Senate, Gillett favored adherence to the World Court, although he opposed the League of Nations. He followed his party's leadership in opposing the repeal of the 18th Amendment and the Volstead enforcement act. In 1931 he refused to accept renomination and retired, in order to devote his time to writing the biography of Sen. George F. Hoar of Massachusetts and his own memoirs. The former book appeared in 1934, but his memoirs were uncompleted.

GIRL SCOUTS. A nonsectarian movement for girls from 7 to 18, started in Savannah, Ga., in 1912 by Mrs. Juliette Low and adapted from the scouting programme begun in England in 1907 by Lord Baden-Powell. It is a leisure-time programme which supplements the work of the church, the home, and the school and encourages girls to learn and practice the cultural and domestic arts that were part of the old-fashioned home's training. The active, paid-up memberships as of Oct. 31, 1935, totaled 375,472, inclusive of Brownies (girls between 7 and 10) and leaders.

The official organ for girls is the *American Girl Magazine*, and for leaders, the *Girl Scout Leader*, each a monthly publication. The national officers in 1935 were: Honorary president, Mrs. Franklin D. Roosevelt; chairman of the board of directors, Mrs. Nicholas F. Brady; president, Mrs. Frederick Edey; secretary, Mrs. Thomas J. Watson; treasurer, Mrs. Edgar Rickard. Mrs. Paul Rittenhouse is national director. Headquarters are at 570 Lexington Ave., New York City.

GLAZEBROOK, SIR RICHARD TETLEY. AN English physicist, died at Limpsfield, Surrey, Dec. 16, 1935. He was born in West Derby, Liverpool, Sept. 18, 1854, attended Liverpool College and graduated from Trinity College, Cambridge with honors in 1876. In the following year he became a Fellow and in 1881 served as a lecturer in mathematics, becoming senior bursar in 1895. He became a demonstrator in physics at the Cavendish Laboratory in 1880 and in 1890 was appointed assistant director.

Selected as principal of University College in Liverpool in 1898, in the following year he was appointed director of the National Physical Laboratory, which post he held throughout the War, retiring in 1919 to become Zaharoff Professor of Aviation and Director of the Department of Aeronautics at the Imperial College of Technology, London, which he held until 1923. During the World War, he rendered the Government great

service in his examination and testing of munitions, and in 1917 he was knighted, becoming Knight Commander of the Bath in 1920 and Knight Commander of the Victorian Order in 1934. He visited the United States in 1926 as a delegate to the International Electrotechnical Convention held in New York City.

Among the more important researches of Dr. Glazebrook were those dealing with the absolute resistance of the British Association unit and the specific resistance of mercury, a dynamical treatment of the theory of double refraction, a verification of Fresnel's theory of double refraction in a biaxial crystal, and other investigations dealing mainly with optics and electricity. For his scientific researches he was Hughes Medallist of the Royal Society (1909); and received the Albert Medal of the Royal Society for his application of natural science to industry (1918); the Royal Medal in 1931, and the Gold Medal of the Royal Aeronautical Society (1933). In 1917, he was Rede Lecturer at Cambridge.

For many years Sir Richard was actively engaged in various organizations, being president of the Institute of Electrical Engineers (1906); Chairman, Aeronautical Research Commission (1908-33); Foreign Secretary, the Royal Society, (1926-29); Member of Statutory Commission for the University of Cambridge (1924); and Member of Standing Commission on Museums and Galleries (1931).

Besides serving as editor of textbooks on Heat, Light, Mechanics, and Electricity, as well as of the *Cambridge Natural Science Manuals*, he was the editor of a *Dictionary of Applied Physics* and the *Transactions* of the Royal and other scientific societies. Also, he wrote a *Textbook of Practical Physics*, with W. N. Shaw (1882); *Textbook of Physical Optics* (1884); *Laws and Properties of Matter* (1893); *Clark-Maxwell and Modern Physics* (1896); and *Science and Industry* (1917).

GOLD. According to preliminary figures issued by the U.S. Bureau of Mines the total mine production of gold in the United States (territories included) amounted to 3,596,991 fine ounces in 1935, which represented an increase of 485,171 fine ounces, or 16 per cent, over the 1934 production of 3,111,820 fine ounces. Based on the average annual value of \$35 per ounce, the 1935 production was worth \$125,894,685, which was \$17,136,626 or almost 16 per cent greater than the 1934 value figure of \$108,758,059, based on the 1934 average value of \$34.95 per fine ounce. The increase in production for 1935 over 1933 was 40 per cent in quantity and 92 per cent in value, and for 1935 over 1932 the increase was 40 per cent in quantity and 137 per cent in value. This disparity between the quantity and value increases reflects, of course, the 69 per cent increase in the value of gold (\$20.67+ to \$35 per fine ounce) that resulted from Government decrees and legislation between Aug. 9, 1933, and Jan. 31, 1934. See UNITED STATES under *Administration*.

Of the total production in 1935, as shown in the accompanying table, California contributed 24 per cent; South Dakota 16 per cent; Alaska 13 per cent; Philippine Islands 12 per cent; Colorado 10 per cent; Arizona 6 per cent; Utah 5 per cent; Nevada 5 per cent, and Montana 4 per cent. In 1934, California contributed 23 per cent; South Dakota 16 per cent; Alaska 17 per cent; Philippine Islands 11 per cent; Alaska 17 per cent; South Dakota 16 per cent; Philippine Islands 11 per cent; Colorado 10 per cent; Arizona 5 per cent;

Utah 4 per cent; Nevada 5 per cent, and Montana 3 per cent.

	Fine ounces 1934	1935	Per cent
Western States and Alaska:			
Alaska *	537,282	453,294	-16
Arizona	167,024	226,500	+36
California	719,064	869,400	+21
Colorado	324,923	351,347	+8
Idaho	84,817	83,800	-1
Montana	97,446	147,850	+52
Nevada	144,275	178,800	+24
New Mexico	27,307	33,560	+23
Oregon	33,712	51,800	+54
South Dakota	486,119	563,952	+16
Texas	359	622	+73
Utah	136,582	184,950	+35
Washington	8,302	9,900	+19
Wyoming	4,871	4,112	-16
Eastern States:			
Alabama	2,781	2,262	-19
Georgia	970	994	+2
North Carolina	509	562	+10
Pennsylvania	623	600	-4
South Carolina	642	1,065	+66
Tennessee	455	425	-7
Virginia	667	477	-28
Central States:			
Michigan	59	...	...
Philippine Islands *	332,974	430,655	+29
Puerto Rico	57	64	+12
Total	3,111,820	3,596,991	+16

* Refinery receipts.

The total world production of gold, as estimated by the *American Bureau of Metal Statistics*, reached the record figure in 1935 of about 30,528,000 oz., based on the assumption that the Russian production was expanded in accordance with indications of the previous year. Russia excluded, the total of the world according to this report, was 25,028,000 oz. South Africa continued to lead the world with 10,773,000 oz., the United States in second position, and Canada in third. The Canadian output, according to the Dominion Bureau of Statistics, reached 3,290,664 oz. as compared with 2,972,074 oz. in 1934.

GOLD CLAUSE ACT. See UNITED STATES under *Congress and Judiciary*.

GOLD COAST. A British West African colony consisting of the Gold Coast colony (23,937 sq. m.), Ashanti (24,379 sq. m.), Northern Territories (30,486 sq. m.), and the British mandate of Togoland (13,041 sq. m.). Total area, 91,843 sq. miles; total population, including British Togoland, 3,444,160 (July, 1934, estimate). Chief towns: Accra, the capital (65,136 inhabitants in 1933), Kumasi (38,559), Sekondi (18,630), Cape Coast (18,307), Tamale (14,975), Koforidua (11,691), Winnebah (10,990).

Production and Trade. Cacao, kola nuts, palm kernels, copra, rubber, maize, yams, timber, gold, manganese ore, and diamonds were the main products. The 1935-36 cacao crop was estimated at 235,000 tons. In 1934, total imports were valued at £4,848,400; total exports, £8,117,456 of which cacao represented £4,040,697; gold, £2,421,595; manganese ore, £480,881; and diamonds, £756,816. There were 6200 miles of roads suitable for automobiles in 1934. The new steel suspension bridge over the river Prah, connecting the central and western provinces, was opened on Oct. 1, 1935.

Government. For the year ended Mar. 31, 1935, revenue amounted to £3,740,191; expenditure, £3,516,175; public debt, £11,863,000. The Gold Coast colony was administered by a governor aided by an executive council, and a legislative council. The Northern Territories, Ashanti, and Togoland (British) were administered by the governor of the Gold Coast, and their statistics of trade,

etc., included in the general total for the Gold Coast. Governor in 1935, Sir Arnold W. Hodson.

GOLDEN GATE. See BRIDGES.

GOLD STANDARD. See INTERNATIONAL BANKING.

GOLF. By all means, the outstanding performer of the 1935 golf season was W. Lawson Little Jr., the burly Californian, who in 1934 had won both the British and American amateur titles. In 1935, practically dedicating himself to the sport, Little successfully defended both titles, an unprecedented feat. Bobby Jones had won all four major titles in 1930, but no one before Little had ever repeated on the double amateur throne. Little finished fourth in the British Open with a score good enough to win several times in the past. In conquering Walter Emery, University of Oklahoma law student, in the national amateur final in September, Little brought his string of victories over the leading amateurs of the world to 31, the longest match play stretch in history.

The United States Open championship, for which Little did not compete, was taken by an unknown, Sam Parks, Jr., a Pittsburgh professional. Another unknown, Arthur Perry, was the winner of the British Open at Muirfield. Parks, former member of the Penn State College team, toured the Oakmont layout in 1929, to win by two strokes on a links which had the experts badly baffled. Jimmy Thompson was second and the veteran Walter Hagen third.

Johnny Revolta won the P.G.A. championship as well as the Western Open, succeeding Paul Runyan as the professional leader. Between these conquests Revolta aided the United States Ryder Cup team in repulsing the British in September. The United States golfers won at Ridgewood, N. J., 9 to 3.

By taking the women's national title for the sixth time, Mrs. Glenna Collett Vare made a record difficult to equal. Miss Virginia Van Wie, winner in the three previous years, did not defend her title and gave notice that she has retired for tournament golf. The 1935 tournament, held at Interlachen, Minneapolis, brought out a new star in Miss Patty Berg, who in her first national championship tourney, fought her way to the final round.

Gene Sarazen won the Masters' Tournament at Augusta, Georgia, on Bobby Jones' course in March, winning over Craig Wood on a miraculous spoon shot for a double eagle on the 15th hole on the final round. Gene Kunes, young Pennsylvanian, won the Canadian Open. The intercollegiate title went to Ed White of the University of Texas and Charley Yates of Georgia won the Western amateur.

GOMEZ, gō'mās, JUAN VICENTE. A Venezuelan president and dictator, died in Maracay, Venezuela, Dec. 17, 1935. He was born at San Antonio de Tachira, July 24, 1854, the son of a cattleman, and received the little education he had at home.

His introduction to politics was made through Cipriano Castro, who enlisted his financial aid in an uprising. Successful at the beginning of the 20th century, Castro became the President of Venezuela, and Gomez the vice president and commander of the army. During Castro's incumbency the country was slowly demoralized, and in 1908, while he was in Europe, Gomez placed himself at the head of the government, becoming president, Aug. 13, 1909, and thus began his long control of the country.

His reign began with the establishment of a coalition party to put into use a rehabilitation programme known as *Causa Rehabilitadora*, and inasmuch as he believed that only through his programme could the country be restored, he forbade any other political party. Opposition to his plans was met with the cry of treason, and a loyal and well trained army, together with a system of espionage, soon controlled any opposition, and Gomez began his work.

The country at the time of his grasp of power was bankrupt and without credit, and diplomatic relations with almost every country were broken off. Out of this chaos, Gomez brought forth a stabilized currency, adjusted credit, and accorded a fair treatment for capital. In 1914 he was succeeded by Dr. Victorina Marquez Bustillos as provisional president, and in 1915 he was reelected, but refused that office, taking for himself the control of the army and dictatorial powers. By the end of his first decade of power, one-fifth of the national debt had been paid off, a public works programme had been put into effect, and a special treasury reserve of about \$7,000,000 was established.

In 1918 he again took over the presidency, and was elected in May, 1922, to hold office until 1929. He also retained the control of the armed force. Just previous to this time, the oil boom occurred. An elaborate policy was evolved whereby foreign investors were invited to prospect for oil and satisfactory monetary arrangements were made, the government getting a 10 per cent royalty together with additional taxes. The industry grew by leaps and bounds and 119,000 bbl. were produced in 1917, which by 1930 had grown to 142,000,000 bbl.

After the election of 1929 Gomez retired as president. Reelected by Congress in April, he refused, and on May 30, Dr. Juan Bautista Perez, who had been named provisional president on April 16, was elected to succeed him. Gomez, however, retained his power by accepting the post of commander-in-chief of the army. The constitution was amended to make this office a constitutional one to be filled by Congress at the same time as that of the president and for the same length of time. Its powers were drastic, the incumbent being made head of all the armed forces and given joint authority with the president. In July, 1931, Gomez reassumed the presidency because of the alleged extravagance of Perez. He held the office until his death, and in 1933 celebrated the 25th anniversary of his dictatorship, which was then as firmly entrenched as in the days of his prime.

During his long control of the Venezuelan government, Gomez established friendly relations with foreign countries, which previous rulers had sundered; balanced the budget; built and improved roads; installed a drainage and irrigation system, and encouraged the raising of stock. During the period of world-wide depression, Venezuela had a balanced budget, low taxes, no foreign debt, a sound currency, stable wages, and little unemployment. With all this good, however, the country was not always peaceful, frequent uprisings, particularly on the part of university students, taking place. In 1927 his imprisonment of students reacted against him throughout the world, and the cardinal principal of his government—that of force and espionage—received much criticism.

GOUCHER COLLEGE. A nonsectarian college for women in Baltimore, Md., founded in 1885.

The enrollment for the first term of the year 1935-36 was 643. The faculty had 86 members. The endowment funds of the college amounted to \$2,468,969. The library contained 63,800 volumes. President, David Allan Robertson.

GRAHAM LAND. See FALKLAND ISLANDS under *Dependencies*.

GRAND ARMY OF THE REPUBLIC. A patriotic order, formed at Decatur, Ill., in 1866 so that veterans who had served in the Federal Army during the Civil War might "enjoy a companionship made sacred by common sufferings and sacrifices." Affiliated with it are its auxiliary, the Women's Relief Corps, and the allied bodies, Ladies of the G.A.R., Daughters of Union Veterans of the Civil War, Sons of Union Veterans of the Civil War, and the auxiliary to the Sons of Union Veterans.

The maximum strength of the organization was in 1890 when it had a membership of 408,487. On Jan. 1, 1935, there were 1344 posts with a membership of 6244. The sixty-ninth national encampment was held at Grand Rapids, Mich., Sept. 8-14, 1935. Oley Nelson of Slater, Ia., was elected commander-in-chief; John P. Risley of Des Moines, Ia., adjutant-general; and Samuel P. Town, Philadelphia, Pa., quartermaster-general. National headquarters are at State House, Des Moines, Ia.

GRAND COULEE DAM. See DAMS.

GRASSHOPPERS. See ENTOMOLOGY, ECONOMIC.

GRAZING. See LANDS, PUBLIC.

GREAT BRITAIN. Official designation for the political union embracing England, Scotland, and Wales. Capital, London. Sovereign in 1935, George V. Together with Northern Ireland, the Isle of Man, and the Channel Islands, it forms the United Kingdom of Great Britain and Northern Ireland. For statistical purposes, the Isle of Man, the Channel Islands, and in some cases Northern Ireland are included under Great Britain. See BRITISH EMPIRE; IRELAND, NORTHERN.

Area and Population. The area of Great Britain, the census population of Apr. 27, 1931, and the estimated population on June 30, 1934, are shown by political divisions in the accompanying table.

GREAT BRITAIN: AREA AND POPULATION

Divisions	Area in sq. miles	Population	
		1931	1934
England (including Monmouthshire)	50,874	37,794,003	40,467,000
Wales	7,466	2,158,374	
Scotland	30,405	4,842,980	4,934,000
Isle of Man	221	49,308	145,000
Channel Islands	75	93,205	
Total	89,041	44,937,444	45,403,000

Live births in England and Wales in 1934 numbered 598,084 (14.8 per 1000 of population); deaths, 476,853 (11.8); marriages, 341,284. This showed the first definite increase in the birth rate since 1920, the lowest rate being 14.4 per 1000 in 1933. In Scotland in 1934 births numbered 88,836 (18 per 1000); deaths, 63,741 (12.9); and marriages, 36,949. British emigrants to non-European countries numbered 25,390 in 1934 (22,690 in 1933) and immigrants of British nationality into Great Britain totaled 39,971 in 1934 (48,618 in 1933). Of the 1934 emigrants from the United Kingdom, 2028 went to the United States, 2167 to Canada and Newfoundland, 4572 to Australia, 1191 to New Zealand, 3392 to British South Africa, and 6096 to India and Ceylon.

The estimated population of Greater London in 1934 was 8,360,500 (8,202,818 at the 1931 census); Glasgow, 1,114,100 (1,088,417); Birmingham, 1,011,500 (1,002,413); Liverpool, 859,200 (855,539); Manchester, 758,140 (766,333); Sheffield, 520,680 (511,742); Leeds, 485,000 (482,809). The population of London proper in 1931 was 4,395,821; Edinburgh, 438,998; Bristol, 496,918; Hull, 313,366; Bradford, 298,041.

Education. In 1934 there were 20,842 public elementary schools in England and Wales, with an average attendance of 5,065,963, and 2909 primary schools in Scotland, with an average attendance of 606,600. There were in England and Wales in 1933-34 2068 recognized secondary schools, with 536,260 pupils, and 7267 technical and vocational schools of all kinds, with 993,664 pupils. In Scotland there were 251 secondary schools, with an average attendance of 164,118, and over 740 special and continuation schools, with a total of about 156,180 students. The 15 universities in England, Scotland, and Wales enrolled 54,078 students in 1934-35.

Agriculture. In 1933 there were in the United Kingdom 13,449,000 acres of cultivable land (22.5 per cent of the total), 22,970,000 acres of grass and pasture, and 328,000 acres of orchards and bushes. The estimated value of agricultural production for 1932-33 was £223,060,000, divided as follows: Livestock and products, £171,040,000; farm crops, £33,580,000; fruit, vegetables, and miscellaneous crops, £28,440,000. Livestock in 1934 included 8,742,000 cattle, 24,944,000 sheep, 3,906,000 swine, and 1,126,000 horses, mules, and asses. Production of wool as in the grease totaled 114,000,000 lb. in 1934. Yields of the chief crops in 1934 were (in thousands of units): Wheat, 69,776 bu.; barley, 38,267 bu.; oats, 142,450 bu.; potatoes, 201,114 bu.; turnips and swedes, 9724 long tons; sugar beets (excluding Northern Ireland), 4103 long tons; beet sugar (1934-35, Great Britain only), 655 long tons; hops (England and Wales only), 29,008 lb.; hay, 7458 long tons. The 1934 fish catch landed in Great Britain totaled 931,565 tons, valued at £15,529,792, excluding shell-fish valued at £489,879.

Mining and Manufacturing. The output for the United Kingdom of the chief mine and factory products in 1934, with 1933 figures in parentheses, was (in thousands of units): Coal, 220,954 long tons (207,112); pig iron, 5979 long tons (4136); steel ingots and castings, 8860 long tons (7024); (smelter), 10.7 metric tons (5.6); zinc (smelter), 46.3 metric tons (45.7). The 1934 output of alcoholic spirits was 52,089,000 proof gal. (41,074,000 in 1933); of beer, 15,521,000 bbl. (14,339,000); rayon, 93,100,000 lb. (84,080,000); motor cars, 342,499 (286,287); shipping tonnage launched, 460,000 (133,000). The consumption of raw cotton was 2,449,000 bales in 1934 (2,440,000 in 1933). The production of electricity, excluding Northern Ireland, was 15,889,000,000 kwh. in 1934 (14,176,000,000 in 1933). The 1933 output of other materials was (in 1000 long tons): Salt, 2355; iron ore, 7462; China clay and related clays, 777; oil shale, 1397; limestone, 13,148; sandstone, 3123; slate, 273; igneous stone, 9205. For industrial trends in 1935, see *History*.

Pig iron output in 1935 was 6,426,400 tons; steel, 9,842,000 tons; coal, 226,524 metric tons.

Foreign Trade. The trend of the United Kingdom's foreign trade during the period 1929-35 is shown in the accompanying table.

BRITISH FOREIGN TRADE, 1929 TO 1935 *

[In thousands of pounds sterling]

Calendar Year	Imports ^b	Exports ^c British products ^a	Re-exports (imported merchandise) ^a	Total exports ^a	Excess of im- ports
1929	1,220,765	729,349	109,702	839,051	381,714
1930	1,043,975	970,755	86,835	1,057,591	386,384
1931	861,253	390,622	63,868	454,490	406,764
1932	701,670	365,024	51,021	416,045	285,625
1933	675,016	367,909	49,081	416,990	258,026
1934 ^d	732,331	396,108	51,263	447,371	284,960
1935 ^d	756,936	425,921	55,265	481,186	275,750

* Not including bullion and specie movements ^b C. i. f. value. ^c F. o. b. value. ^d Provisional figures.

The principal 1934 imports were (in 1000 gold dollars): Raw wool, 111,808; raw cotton, 105,006; butter, 100,075; bacon, 90,337; tea, 83,922; wheat, 83,035; sawn wood, 81,683; beef, 56,820; mutton and lamb, 52,753; machinery, 43,079. The chief export items were (in 1000 gold dollars): Machinery (including electric), 122,924; cotton piece goods, 119,705; iron and steel, 105,600; coal, 95,755; woollens and worsteds, 47,724; chemicals, 47,410; cotton yarn, 31,771. Gold imports in 1934 totaled \$797,134,000; silver, \$68,257,000. Gold shipments were valued at \$396,247,000; silver, \$37,746,000.

The principal sources of British imports in 1934 were (in £1000 sterling, 1933 figures in parentheses): United States and dependencies, 82,938 (76,610); India and Ceylon, 53,436 (46,433); Canada, 50,413 (46,216); Australia and Papua, 50,126 (48,655); Argentina, 47,046 (41,687); New Zealand, 40,445 (37,171); the Netherlands, 36,792 (31,497). The distribution of British exports by leading countries in 1934 (1933 in parentheses) was (in £1000 sterling): India and Ceylon, 39,514 (35,533); South Africa, 30,248 (23,355); Australia and Papua, 26,315 (21,413); France and its dependencies, 20,292 (22,058); Canada, 19,725 (17,444); Irish Free State, 19,531 (19,034); United States and dependencies, 18,098 (18,843); the Netherlands and dependencies, 14,867 (15,553). United Kingdom imports from other units of the British Commonwealth of Nations totaled £271,465,000 in 1934 (£249,137,000 in 1933), against £460,862,000 from foreign countries (£425,892,000 in 1933). United Kingdom exports to other British countries were £185,626,000 in 1934 (£163,517,000 in 1933), while exports to foreign countries were £210,472,000 in 1934 (£204,370,000 in 1933).

United States figures for 1935 showed imports from Great Britain of \$155,322,776 (\$115,357,580 in 1934) and exports to Britain of \$433,384,884 (\$382,748,936 in 1934).

Finance. Budget operations for the fiscal years ending March 31 are shown in the accompanying table.

UNITED KINGDOM: BUDGET OPERATIONS

Year	Receipts, ex- cluding loans	Expendi- tures	Balance
1931-32	851,482,281	851,117,944	+ 364,337
1932-33	827,031,000	859,310,173	- 32,279,173
1933-34	809,379,149	778,231,289	+ 31,147,860
1934-35	804,629,050	797,067,171	+ 7,561,879
1935-36 ^a	826,150,000	820,540,000	+ 5,610,000

^a Estimates.

The public debt on Mar. 31, 1935, was £7,800,436,000, or a decrease of £21,861,193 from the total on Mar. 31, 1934. Of the total sum, £1,036,545,184 represented the external debt, £3,368,146,605 the internal funded debt, £12,088,795 terminable annuities, £833,380,000 the floating internal debt, and £2,671,974,510 other unfunded internal obligations.

Shipping. The gross tonnage of merchant ships registered in Great Britain and Ireland on June 30, 1935, aggregated 17,400,400 as against 17,734,900 tons on June 30, 1934. Idle tonnage on June 30, 1935, was 963,000 (1,719,000 the year previous). The net registered tonnage of vessels entering British ports in the year ended Mar. 31, 1934, aggregated 85,359,000, of which 62,671,000 tons entered with cargo and 22,688,000 tons with ballast. Shipping services rendered foreigners by British vessels during 1934 had an estimated value of £64,000,000, as compared with £59,000,000 in 1933 and £130,000,000 in 1929.

Railways. Railway lines open to traffic in 1934 totaled 20,383 miles (divided into four main systems). In the same year they carried 1,123,600,000 passengers (excluding commuters) and 260,390,000 tons of freight, exclusive of 10,434,000 head of livestock. The net revenue was £31,480,816 (£28,804,163 in 1933). In November, 1935, the British Government reached an agreement with the four railway systems for the carrying out of a five-year programme of railway reconstruction and improvements at a cost of about £30,000,000.

Other Communications. Highways in Great Britain at the beginning of 1934 extended 177,347 miles (England and Wales, 151,854; Scotland, 25,493). The principal canals in 1933 carried 11,434,504 tons of freight. Civil air lines in 1933 reported a total distance flown of 2,638,000 miles; passengers, 79,080; goods and mail carried, 2,045,000 lb. Five British air lines were combined into one organization late in 1935, the new company taking over the operation of 2200 miles of routes, chiefly in the United Kingdom. The number of radio licenses outstanding in 1934 was 6,780,569, an increase of 806,811 over 1933.

Government. The United Kingdom is a limited monarchy, with an unwritten constitution, under which final legislative, judicial, and administrative authority is vested in a Parliament of two houses, acting through a cabinet drawn from its members. The House of Commons consists of 615 members, elected by male and female suffrage on the basis of one member for every 70,000 of population. The House of Lords has a voting strength of about 768 members. Prime Minister at the beginning of 1935, James Ramsay MacDonald (National Labor), heading a coalition composed of the Conservative and factions of the Labor and Liberal parties. For cabinet changes and the general election in 1935, see *History*.

HISTORY

The collision with Italy over Ethiopia, King George's Silver Jubilee, a general election in which the Conservatives triumphed, the launching of a great rearmament programme, and sustained economic recovery made the year 1935 a memorable one in British history. Surveying the European scene towards the end of the year, such a realistic American observer as Frank H. Simonds reported that "not since the days of Castlereagh and Wellington had British prestige stood so high." And Walter Duranty, in a London dispatch of December 3 to the *New York Times*, presented the following analysis of the British situation:

London presents a striking contrast to Paris. Here is confidence instead of alarm, hope instead of fear, union instead of discord. On the economic side the difference is still more marked to British advantage, and these material and moral factors have a corresponding influence upon the British attitude toward foreign affairs.

London is well aware of the gravity of the present international situation, but faces it without pessimism, the shadow of coming war lies lighter over Britain than over

Continental Europe. Finally, and most important of all, London has an atmosphere of energy and initiative, of determination to act before it is too late, whereas Paris and most of the Continent seem resigned to the inevitable and at best are only trying to postpone the evil day.

The Economic Upswing. The basis of British optimism was the general and continued economic upswing, which had been carefully nursed along by the National Government since 1933. By the end of 1935 the recovery in many lines had surpassed the peak year of 1929. The index of industrial production (Base: 1929 equals 100) stood at 105.7 for 1935, as compared with 98.8 for 1934 and 88.2 for 1933. The number of employed persons increased in 1935 to an average of 10,380,000, against 10,142,000 in 1934 and 10,223,000 in the previous record year of 1929. The average number wholly unemployed was 1,714,844 in 1935, 1,801,913 in 1934, and 994,091 in 1929, indicating that the increase in the number of employed was insufficient to absorb the growing working population. Behind their new tariff walls British industries were making unexpected progress. Sheffield at the end of the year was producing more steel than ever before. The boom in private housing and public slum replacement construction continued. British railways carried more passengers and freight in 1935 than in 1934, although the gross earnings of £150,797,000 were only 1 per cent larger.

While the principal stimulus to industry came from domestic demand, there was a 10 per cent increase in exports in 1935 as compared with 1934, and a similar expansion of imports. Exports of British iron and steel were aided by the agreement of June 4, 1935, between the British Iron and Steel Federation and the International Steel Cartel apportioning the European markets between them. The number of foreign visitors to Britain in 1935 was 315,744, an increase of 27,143 over the previous year. The income from foreign investments, which totaled £158,300,000 in 1934, showed another increase in 1935, but was still only half of the peak total of £300,000,000 received in 1926 and 1927. Gold imports during 1935 exceeded exports by £70,071,000. Against this generally favorable picture there stood out the continued stagnation of economic activity in the so-called distressed areas in Scotland, North England, and Wales, and the discouraging condition of agriculture which was only partly relieved by government subsidies and other aids.

Domestic Affairs. The domestic economic and political situation at the beginning of 1935 was far less encouraging than in later months. The winter brought a slackening of economic recovery and a temporary increase of unemployment. The new Unemployment Assistance Regulations, introduced early in January, produced widespread discontent, accompanied by a series of disconcerting demonstrations and riots. Prime Minister MacDonald's leadership of the government was becoming increasingly distasteful to both the Right wing of the Conservative party and to the Laborites, who had never forgiven his desertion in 1931. There was increasing restiveness at the conduct of the Foreign Office by Sir John Simon. Criticisms of the government for alleged inaction and incompetence were climaxed by a series of addresses delivered by former Prime Minister Lloyd George during January. He proposed the collaboration of all parties in a radical programme of economic reorganization designed to end the paradoxical co-existence of poverty and plenty.

The widespread and favorable public response

to Lloyd George's proposals was a measure of the government's unpopularity and, with a national election in the offing, aroused the anxiety of government leaders. Another shock to public confidence came early in February with the failure of a number of important London brokerage and commercial concerns ruined in a speculative effort to corner the pepper market. The objectionable Unemployment Assistance Regulations were modified by a measure rushed through Parliament and signed by the King on February 15. This failed to calm the agitation among the unemployed, however. Their demands for a more liberal policy and abolition of the hated means test were reinforced by a severe clash between unemployed and the police in South Wales on March 21 and a great demonstration in Glasgow on March 24. The problem of revision of the unemployment relief system, after being studied carefully during the year, was postponed to 1936 for final action.

On March 1, also, Prime Minister MacDonald asked Lloyd George for full details of his "New Deal" proposal and promised to weigh them carefully. It was not until July 22, after renewal of the economic upswing had revived the government's prestige, that the proposals were flatly rejected as "disappointing," "hazardous," and "uncertain."

Presentation early in March of budget estimates for the army, navy, and air forces showed a \$53,000,000 increase over 1934-35 appropriations and aroused an uproar from the Opposition, but this was largely stilled by the Chancellor of the Exchequer's popular speech of April 15 presenting the budget for 1935-36 to Parliament. He promised a balanced budget despite restoration of government salaries to the pre-depression level and a reduction of taxes on smaller incomes equivalent to \$50,000,000 annually. Britain, he declared, had recovered four-fifths of her pre-depression prosperity. The celebration of the 25th anniversary of King George's reign, which commenced on May 6 and continued for a month, enhanced the confidence and good spirits induced by reviving prosperity. All the Prime Ministers of the Dominions journeyed to London for the occasion and tributes from practically all parts of the Empire except the Irish Free State added to the impressive mass demonstrations of esteem for the King and Queen held in London and other British cities.

On June 7 occurred the long-predicted reorganization of the Cabinet. Stanley Baldwin replaced Mr. MacDonald as Prime Minister and First Lord of the Treasury. Sir Samuel Hoare succeeded Sir John Simon as Foreign Secretary and the new portfolio of Minister for League of Nations Affairs was created for the rising young Capt. Anthony Eden. Lord Sankey, Sir John Gilmour, and Sir Edward Hilton Young also were eliminated and the following new members took the vacant places: Lord Zetland, Secretary for India; Malcolm MacDonald (son of the former Prime Minister), Secretary for the Colonies; Ernest Brown, Minister of Labor; Lord Eustace Percy, Minister without Portfolio. Ramsay MacDonald was given the post of Lord President of the Council. The new Cabinet included 15 Conservatives, 4 National Liberals, and 3 National Laborites.

Legislation. Under new leadership the government continued to push forward its extensive legislative programme. When Parliament recessed on August 2 it had passed 95 bills, some of them of more than usual significance. The Housing Bill, supplementing the five-year slum clearance proj-

ect under way, prohibited overcrowding of tenants and extended national subsidies to aid local authorities in new construction. The momentous Government of India Bill, signed by the King on August 2, provided for far-reaching reforms and the extension of self-government in India (q.v.). Subsidization of the British livestock industry was extended to Oct. 31, 1936. Walter Elliott, the Minister of Agriculture, announced that an agreement had been reached with the Dominions whereby, upon the expiration in November, 1936, of the Anglo-Argentine trade agreement, the domestic meat subsidy would be abandoned in favor of a tariff levied on all imported meat, with a preferential rate on meat from Australia and New Zealand.

Another measure guaranteed the principal and interest of securities aggregating about \$175,000,000 issued for the electrification of transportation in London and the suburbs. Laws for the regulation and rationalization of the coal and the Lancashire cotton industries were passed, the latter establishing minimum wages for the protection of both owners and workers against the twin evils of price cutting and wage cutting. The Ribon Development Bill, restricting private housing construction along newly developed government highways, was another important measure designed to enhance the beauty of rural England. Passage of this measure was followed by the government's announcement in November that it would spend the equivalent of \$500,000,000 on road building over a five-year period. At the same time the Exchequer arranged to guarantee loans of \$150,000,000 for railway improvements and reconstruction.

The government also announced its intention of introducing legislation for the rehabilitation of the distressed areas. This great national problem had aroused increasing government concern. Reports of the Commissioners for the Distressed Areas, made public on July 17, indicated the extent of the disaster inflicted by industrial changes upon these blighted areas. Transference of a large part of the population to other more prosperous regions was declared necessary. The commissioners' other recommendations called for the placing of government orders with factories in the distressed areas so far as possible; the abolition of child labor in industry; the extension of social services; shorter working hours, with the aid of a government subsidy, if necessary; etc. By the end of the year the government had already arranged to spend between \$15,000,000 and \$20,000,000 for relief of the distressed areas, but plans for a fundamental attack upon the problem were still being studied.

The Sanctions Issue. The most pressing problem which confronted the Baldwin Government and the British people during the year was that of the policy to be pursued in the face of Italy's attack upon Ethiopia in violation of the League Covenant and the rapid drift towards another great war in Europe. Even before Italy's aggression against Ethiopia had taken place, this problem had been raised by an investigation into the British arms industry conducted by a royal commission and the great peace poll conducted by the British League of Nations' Union. The arms inquiry revealed that prominent members of the government, clergy, and even of the royal family were stockholders in armament firms. Proprietors of certain newspapers agitating for an increased air force were shown to be financially interested



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GEORGE V

He celebrated the twenty-fifth anniversary of his accession on May 6, 1935



Acme

STANLEY BALDWIN

Appointed Prime Minister, June 7, 1935



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ANTHONY EDEN


Appointed Foreign Secretary, Dec. 22, 1935



SIR SAMUEL HOARE

Appointed Foreign Secretary, June 7, 1935, resigned Dec 18, 1935

GREAT BRITAIN



Wide World

THE KING REVIEWS HIS ARMADA

Air view of the British Home and Mediterranean Fleets assembled off Spithead on July 16, 1935, with the Royal Yacht *Victoria and Albert* in the foreground. Shortly afterward both fleets were ordered to the Mediterranean.



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THE JUBILEE PROCESSION

The King and Queen driving up the Mall en route to the Palace after attending a Thanksgiving service at St. Paul's, May 6, 1935

KING GEORGE'S SILVER JUBILEE

in aviation concerns. These facts contributed to the overwhelming demand for abolition of the private manufacture of arms revealed in the peace ballot.

A total of 11,627,765 votes were cast in this unofficial poll which started in January and was concluded June 27. The final results showed: (1) that 11,090,387 favored British membership in the League of Nations, 355,883 were opposed, and 112,895 were doubtful or abstained from voting; (2) that 10,470,489 favored all-round reduction of armaments by international agreement, 862,775 were opposed, and 225,901 were uncertain; (3) that 9,533,558 favored all-round abolition of national military and naval aircraft by international agreement, 1,689,786 were opposed, and 335,821 were uncertain; (4) that 10,417,329 favored prohibition of the manufacture and sale of armaments for private profit, 775,416 were opposed, and 366,421 were uncertain; (5) that 10,027,608 favored application of collective League economic non-military measures against a nation which attacked another, 635,074 were opposed, and 882,362 were uncertain; (6) that 6,784,368 favored application of collective military measures if necessary to restrain an aggressor nation, 2,351,981 were opposed, and 2,405,334 were uncertain.

This demonstration of overwhelming popular support for the League of Nations and a system of collective security based upon economic and, if necessary, military sanctions was one of the chief factors influencing the Baldwin Government to abandon its hitherto complacent attitude towards the impending Italian assault upon Ethiopia, which had been manifest since the beginning of the year. On September 11 Sir Samuel Hoare, the new Foreign Secretary, made his famous speech before the League of Nations Assembly, pledging that Britain would join in offering steady collective resistance to an aggression carried out in defiance of the Covenant. He thus took the initiative in mobilizing the League powers for strong action against Italy.

The government's stand on this issue won almost unanimous endorsement from all sections of opinion in Great Britain. The Trades Union Congress at its annual meeting at Margate earlier in September had approved application of sanctions against Italy by a vote of 2,962,000 to 177,000. The Labor Party Congress at Brighton on October 2 gave the proposal an even greater majority. The Conservative party conference at Bournemouth on October 3-4 and the Liberals on October 3 also registered their approval. Important leaders dissented from the sanctions idea, but were able to make no headway against the predominantly favorable attitude among the rank and file of all parties. Sir Stafford Cripps, a member of the Labor party executive; Lord Ponsonby, Labor leader in the House of Lords; and George Lansbury, Labor leader in the House of Commons, all resigned in protest against the sanctions policy.

The General Election. The launching of the Italian attack upon Ethiopia beginning October 3 gave the Baldwin Government an opportunity to win still greater popular support and prestige at home by its leadership at Geneva in inducing the League powers to apply economic and financial penalties against Italy. The time was propitious for seeking a renewal of the government's mandate from the electorate. Accordingly Prime Minister Baldwin summoned Parliament on October 22 and prorogued it after three days of debate on foreign

policy, without discussion of domestic problems. The election was set for November 14.

The National Government went before the voters on a platform which declared the League of Nations to be the keystone of British foreign policy, called for large-scale rearmament to safeguard the Empire and "fulfill our obligations toward the League," favored the lowering of trade barriers through bilateral agreements, urged the extension of unemployment insurance to agricultural workers and the creating of further employment by "use of the credit and other resources of the State." The Labor party, now led by Clement R. Atlee, campaigned on a platform of "socialism at home and peace abroad." The party manifesto pledged support of the League against Italy in Africa and maintenance of necessary defense forces pending their reduction by international agreement. It reiterated its previous demands for nationalization of the land, natural resources, and of the transport, banking, iron and steel, coal, and cotton industries.

The campaign was in some respects a sham battle, however, as the Labor party did not wish to take over the government in the face of an international crisis. The result was a complete victory for the Conservative party and its allies. The government won 431 out of 615 seats in the House of Commons, as against the overwhelming majority of 513 secured in the election of October, 1931. The standing of the parties in the government bloc after the November balloting, with the previous standing in parentheses, was: Conservative, 387 (463); Liberal National (leader, Sir John Simon), 33 (35); National Labor (leader, Ramsay MacDonald), 8 (12); Independent National, 3 (3). The respective standings of the Opposition parties were: Labor (leader, Clement R. Atlee) and Independent Labor (leader, James Maxton), 154 (61); Liberal (leader, Sir Archibald Sinclair), 21 (32); Independent Liberal, 4 (4); Independent, 4 (5); Communist, 1 (0). The government's loss was much less than even the Conservatives had expected. The Labor party, however, regained practically all of its voting power, lost in the crisis election of 1931. In fact, the total Opposition vote of 10,209,505 was only 1,582,827 less than the government's total of 11,792,332 votes. The government votes were distributed by parties as follows: Conservatives, 10,488,626; Liberal Nationals, 866,624; National Laborites, 339,811; Independent Nationals, 97,271. The vote of the Opposition groups was: Labor, 8,325,260; Independent Labor, 139,517; Liberals, 1,377,962; Independent Liberals, 65,150; Independents, 274,499; Communists, 27,117.

The elections furthered the trend toward return of the two-party system, with the Conservative and Labor parties dominating the government and Opposition blocs, respectively. The Liberal party was badly shattered, even Sir Herbert Samuel, its leader, being defeated for reelection. Sir Archibald Sinclair was chosen to succeed him. The government's victory resulted in another cabinet reorganization on November 22. Lord Londonderry's place as Lord Privy Seal was taken by Viscount Halifax, the former Secretary for War. Alfred Duff Cooper took over the War portfolio and with it the task of supervising Britain's rearmament. Malcolm MacDonald and J. H. Thomas exchanged positions, the former becoming Dominions Secretary and the latter Colonial Secretary. Sir Philip Cunliffe Lister, Secretary for Air, and Sir Bolton Eyres-Monsell, First Lord of the

Admiralty, both were elevated to the House of Lords with the titles of Viscount Swinton and Viscount Monsell. This was the cabinet line-up when Parliament convened on December 3. Only five days later the revelation of the Hoare-Laval proposals for settlement of the crisis over Ethiopia by giving half of the black empire to Italy aroused a storm which cost Sir Samuel Hoare his post as Foreign Secretary on December 18 and almost upset the entire cabinet (see *Foreign Relations*). Anthony Eden succeeded Sir Samuel in the Foreign Office; his former post of Minister for League of Nations Affairs was not filled. Besides the all-important problem of foreign policy, the cabinet and Parliament as the year closed were wrestling with the questions of the distressed areas, a threatened strike in the coal fields, and the revision of the unemployment assistance regulations.

Foreign Relations. The rearmament of Germany, the Italian attack upon Ethiopia and indirectly upon the League of Nations, and the Japanese advance in North China into an important sphere of British economic interest presented the most serious threats to the British Empire since the World War. The menace of German rearmament, which had been growing since Hitler's advent to power in 1933, became acute with the restoration of German conscription in violation of the Versailles Treaty on March 16. The Italian invasion of Ethiopia commenced October 3, and the extension of the Japanese sphere in North China came to a head in December. Thus Britain was faced throughout most of the year with growing foreign anxieties and mounting dangers which aroused widespread fear of new wars endangering the economic revival at home.

German Rearmament. Realizing that the rapid development of aerial warfare made a policy of isolation from Continental affairs even more impossible than in 1914, the British Government during 1935 wavered between two alternate courses with respect to the resurgent military might of Germany. During the first part of the year, under Sir John Simon's guidance, the Foreign Office strove to reconcile Germany with France and the rest of Europe by offering to recognize German equality and to negotiate a new settlement to replace the Versailles Treaty. It was hoped that under these conditions, Hitler would agree to re-enter the League of Nations and accept proposals for a peaceful settlement of German grievances. To win France, Italy, and the other European nations over to this plan, the British reiterated their pledge to support the independence of Austria against Germany. They also lent powerful aid to the Franco-Soviet proposal for guaranteeing the frontiers of Eastern Europe by a multilateral pact of mutual assistance and of non-interference in internal affairs. Such a general settlement, envisaging maintenance of the territorial *status quo* in Europe but the restoration of Germany to equality in armaments and in position at Geneva, was set forth in the Franco-British communique of February 3, issued after conversations between Sir John Simon and Foreign Minister Laval in London.

Hitler's response to this overture was received on February 14. He welcomed the suggestion for a convention of mutual assistance against unprovoked air attack but ignored the proposed Eastern Locarno and Central European non-aggression pacts. He thus sought to secure the legal abolition of the Versailles military restrictions without committing himself to accept the

status quo in Eastern and Central Europe. He further sought to drive a wedge between Britain and France by proposing direct Anglo-German conversations on the whole problem. Sir John Simon then arranged to visit Berlin on March 7, but the publication of the British White Paper of March 4 attributing the need of rearmament to military preparations by other countries, particularly Germany, aroused indignation in Berlin. It was announced that Hitler would be unable to receive the British Foreign Secretary because of a cold. Two days later the British Cabinet sent Captain Eden, then Lord Privy Seal, to Moscow and Warsaw to discuss the possible development of a European peace system based upon mutual assistance pacts.

On March 16 Hitler's sudden announcement of the reintroduction of conscription in open violation of the Versailles Treaty produced a grave European crisis, which caused a shift in British policy. The announcement that Germany already had an air force equal in strength to Britain's and that she was carrying forward the construction of submarines and other naval craft at an accelerated pace aroused British anxiety even more than the expansion of the German army. Nevertheless Foreign Secretary Simon's note of protest at unilateral repudiation of the peace treaties was mild in tone, in contrast to that of France and Italy. Swallowing Hitler's rebuff, Simon again suggested direct conversations with the Reich Chancellor in Berlin. These exchanges, held on March 25-26, served only to arouse further apprehension in British official circles. Sir John revealed before the House of Commons on March 28 that "a considerable divergence of opinion" between the two governments had been revealed in Berlin. Thereafter the British tended increasingly to accept the Franco-Soviet-Italian thesis that if Germany would not reenter a European system of collective security, it was necessary to establish one without her, and if need be, against her. An agreement along this line was reached during Captain Eden's visit to Moscow on March 30-31 and to Czechoslovakia in April. But the Polish Government proved unwilling to join in an Eastern Locarno without German participation when the British emissary visited Warsaw on April 2-3. The Eastern Locarno project soon collapsed under the weight of German and Polish opposition.

At the Stresa Conference on April 11-14, Britain joined with France and Italy in measures to prevent further treaty violations by the Reich. Britain and Italy reiterated their guarantee of the Franco-German boundary under the Locarno Treaty, and warned Hitler that they would consider violation of the demilitarized zone of the Rhineland as a breach of the Locarno Treaty. Nevertheless the British did not abandon hope of reaching an agreement with Germany which would facilitate her return to the League, and at the same time increase British security. This wavering policy was climaxed by the sudden conclusion of the Anglo-German naval agreement of June 18, by which Britain agreed to the construction of a German navy 35 per cent of the British tonnage. She thus gave direct support to a new German infraction of the Versailles Treaty after having agreed at Stresa to unite with France and Italy in opposing such violations. The British excuse was that the naval agreement merely recognized legally the undisputed fact that the military clauses of the Versailles Treaty were already dead. Nevertheless their action shattered the Stresa front

temporarily, gave Hitler's régime tremendous added prestige at home, and greatly angered France and Italy.

Anthony Eden was sent to Paris and Rome to explain the British point of view. His conversations with Foreign Minister Laval on June 21-22 ended in the restoration of Franco-British co-operation for the purpose of building up "peace by the organization of collective security." In Rome on June 23-24 Mr. Eden met a very cool reception, not because of the Anglo-German naval treaty, but because the conflict between Britain and Italy over Ethiopia was beginning to reach serious proportions. Thereafter the problem of German rearmament was relegated to the background so far as Britain was concerned by the Ethiopian crisis. But it remained a constant threat to British security, and together with the Japanese expansion in China, was responsible for the continuous British efforts to reach an amicable settlement of the Italo-Ethiopian dispute by compromise.

The Anglo-Italian Crisis. Although Mussolini's designs upon Ethiopia had been apparent from the beginning of the year, it was not until Captain Eden's visit of June 23-24 to Rome that Anglo-Italian relations became strained. Mussolini's curt rejection of a British offer to facilitate an Italo-Ethiopian settlement by giving Ethiopia access to the sea through British Somaliland led Eden to warn him that Britain "could not remain indifferent to events which might profoundly affect the League's future." The successive steps by which Britain and Italy reached the verge of armed hostilities are recounted in detail in the articles on ETHIOPIA and ITALY under *History*.

Three objectives motivated the British in their opposition to Mussolini's conquest of Ethiopia. They desired first to save the League, which was both Britain's first line of defense and her main hope of developing an alternative to war. Secondly, they desired to restrict Italian expansion in Ethiopia to regions which did not menace British control of the headwaters of the Blue Nile and the safety of Egypt and the Sudan. They also feared that Italy's complete dominance of Ethiopia would provide a base for expansion into neighboring British territories, give Italy with a great reservoir of Negro fighting men, and menace British communications along the route to India, so-called "life-line" of the Empire. Thirdly, they sought to curb another German bid for military hegemony in Europe by demonstrating—and also testing—the effectiveness of the League's economic weapons in punishing a nation which resorted to the sword to achieve its objectives.

The British were only less anxious than the French to preserve Italy as a possible ally against Germany and to prevent an additional blow to the League's effectiveness through Italy's withdrawal. Moreover the Conservative interests dominating the Baldwin Government feared that the overthrow of Mussolini's régime would result in the triumph of communism, and they greatly preferred a Fascist Italy to a Communist Italy. Furthermore they saw that even a successful war against Italy would seriously weaken Britain and render her less able to defend her interests on the Continent against Germany and in the Far East against Japan. These circumstances explain the seemingly contradictory course of British policy in offering Mussolini increasingly valuable concessions in Ethiopia and at the same time bringing increasing pressure to bear to force him to

accept them. The Anglo-Italian crisis resulted from Mussolini's obdurate refusal to be deterred from his Ethiopian adventure by either inducements or threats.

Following Mussolini's rejection of the Anglo-French proposals at Paris on August 18, the British Cabinet met in emergency session on August 22 and decided to act collectively with the other League members in upholding the Covenant. Additional warships and aeroplanes and garrison reinforcements were sent to British bases in the Mediterranean. But the Cabinet was still divided as to the advisability of taking the lead in urging League sanctions against Italy. A further effort at compromise was made through the conciliation commission appointed by the League Council on September 6. While this commission was at work Foreign Secretary Hoare made his notable speech of September 11 before the League Assembly declaring that Britain stood "for the maintenance of the Covenant in its entirety and particularly for steady and collective resistance to all acts of unprovoked aggression." Having made certain that sanctions would be employed against Italy if Mussolini proceeded with his plans, Sir Samuel went on to intimate that the League must realize international justice as well as establish international order and that it must take the lead in eliminating the grievances which caused nations to resort to war. He thus held out the offer to Italy of League aid in solving the economic problems which Mussolini had declared necessitated more profitable Italian colonies in Africa.

Almost simultaneously with the presentation to Italy on September 18 of the Council committee's proposals for Italian participation in the economic development of Ethiopia, the main British fleet appeared in the Mediterranean. Mussolini curtly rejected the League proposals and instead of submitting to the British naval threat concentrated air and naval squadrons in position to attack Malta and sent several divisions of troops to the Egyptian frontier in Libya, where they threatened to advance upon Cairo. With these developments tension between Britain and Italy reached an acute stage. The British rushed reinforcements to Egypt and hurriedly strengthened the defenses of Gibraltar, Malta, and other Mediterranean bases. In response to Italian protests at these measures, the British stated on September 20 that their military preparations were motivated only by the violent anti-British campaign in the Italian press and that they implied no "aggressive intention."

On September 28 the Italian Cabinet appealed to the British people to disregard "anti-Fascist mystifications" and to grasp the fact that Italy was willing to negotiate further accords "which would harmonize with legitimate British interests in East Africa." But with the Italian invasion of Ethiopia on October 3 the Anglo-Italian crisis deepened. The British cabinet rejected a proposal by Mussolini, supported by France, that Britain withdraw its fleet from the Mediterranean in return for withdrawal of the Italian troops from the Egyptian border. Instead the British, with the active support of the smaller League States and the Soviet Union, prodded the League Assembly into declaring Italy the aggressor on October 11. This paved the way for the first large-scale application of sanctions in League history—an experiment in "putting teeth" into the League peace machinery which promised to have historic significance. See LEAGUE OF NATIONS.

Meanwhile the British were seeking to obtain promises of military aid from France and the other League powers in case the application of League sanctions led to an Italian attack upon the British fleet and bases in the Mediterranean. On September 24 Sir Samuel Hoare inquired if French naval assistance would be forthcoming in such an eventuality. France, fearing that sanctions against Italy would precipitate a European war which would serve Germany as a pretext for satisfying its territorial ambitions, moved with great caution. In a note of October 7 the Paris government offered to assist Britain on condition that the latter agreed (1) not to apply the League Covenant or the Locarno Treaties without previously consulting France and (2) to assist France on land and in the air in the event of a threatened attack upon her by Germany.

The British declined to commit themselves irrevocably to aid France against Germany. The Foreign Secretary replied to the French note by stating that while Britain stood for "collective resistance to all acts of unprovoked aggression," this did not apply to "a negative act of failure to fulfill terms of a treaty." He thus drew a distinction between Italy's threatened aggression upon Ethiopia and possible German violations of the Versailles Treaty, which did not involve an attack upon France. This difference of policy during a time when danger of war loomed steadily nearer aroused much Anglo-French ill feeling. The British charged France with refusing to fulfill her obligations under the League Covenant while the conservative French press bitterly assailed Britain for seeking to precipitate a European war by its intransigence toward Italy. The crisis was relieved somewhat on October 18 when Premier Laval finally promised Britain naval assistance in the Mediterranean provided the British fleet was used only in accordance with the League's decision. On the same day the British Ambassador to Rome assured Mussolini that Britain did not intend to take any action "beyond what might be agreed to or recommended by the League in conformity with the dispositions of the Covenant."

The Anglo-Italian crisis again developed to a grave stage late in November when Mussolini declared that the proposed League oil embargo would be regarded as cause for war. On November 28 Premier Laval relieved the tension by warning Italy that an attack upon Britain would force France and the other League powers to go to Britain's assistance. Yet the British remained dubious of the value of the promised aid, in view of the strong division of opinion on the issue in France and the threatened civil war between the Left and the Right forces which at any moment might eliminate France as a force in European affairs. See FRANCE under *History*.

Facing this critical situation, and with the general election behind it, the Baldwin Government agreed with Premier Laval of France upon another effort to conciliate Mussolini, before proceeding to the proposed application of an oil embargo. The so-called Hoare-Laval peace proposals of December 8 went far beyond previous offers, giving Italy actual or virtual possession of nearly one-half of Ethiopia (see ETHIOPIA and ITALY under *History*). This attempt to buy off Italy at Ethiopia's expense aroused a tremendous storm of protest in Great Britain, as elsewhere among the neutral League powers. Prime Minister Baldwin was forced to bow before the storm to avert threatened defeat in the House of Commons. The

proposals were disavowed and the replacement of Sir Samuel Hoare by Anthony Eden on December 22 was followed by a return to the policy of sanctions and of full support of the League Covenant.

Realizing that this policy might eventually involve Britain in war with Italy, the cabinet late in December announced additional plans for modernization and mechanization of the army and navy. Fresh negotiations between the French and British general staffs took place. On December 21 Foreign Minister Eden announced that Turkey, Greece, Rumania, Yugoslavia, and Czechoslovakia had promised military aid to Britain in the event of an Anglo-Italian conflict over League sanctions. Negotiations for a similar pledge from Spain and Portugal were under way as the year ended. Thus Britain was in a position to push for the application of more drastic economic and even military sanctions against Italy, with the assurance of an overwhelming concentration of military might against Italy should she decide to resist. But the fear of German aggression dominated all diplomatic calculations and threatened to prevent a show down with Mussolini. This fear was increased by an unsuccessful British effort in December to discuss an arms limitation agreement with Hitler's government; by the growing Nazi agitation for the return of Memel and against League control of Danzig; by the German threat to end the demilitarization of the Rhineland, coupled with the charge that the Anglo-French military and naval consultations violated the Locarno Treaties; by the Reich's demand for return of its former colonies; and by its hostility to the Franco-Soviet pact of mutual assistance. Fearing that drastic action against Italy would be the signal for German action, and yet realizing that failure to restrain Italy would serve to encourage Nazi territorial ambitions, France and Britain at the close of 1935 were faced with a dilemma which it seemed impossible to resolve without starting a European conflagration.

London Naval Conference. Dangers threatening Britain from other directions besides the Continent were emphasized by the London Naval Conference, which opened at the British capital on December 9 and was still in progress at the close of the year. The British objective at the conference was to secure a quantitative and qualitative limitation agreement for seven years. But developments during the preliminary stages of the conference aroused little hope of an agreement. Japan immediately pressed her demand for naval parity with Britain and the United States at a time when Japanese expansion in North China was arousing the utmost apprehension in British official circles (see CHINA under *History*). The resumption of German naval construction also added to the difficulty of reaching an agreement with France and Italy. After the Anglo-German naval treaty of June 18, 1935, France had announced that she resumed liberty of action in naval construction and hastened construction of four new capital ships. Italy reiterated her demand for naval parity with France. Great Britain herself had served notice on July 22 that she had abandoned the effort to secure naval limitation by the ratio principle, while Secretary of the Navy Swanson of the United States on October 23 reiterated American insistence upon continuation of the existing naval ratios. See NAVAL PROGRESS.

For further details and other aspects of British foreign policy during 1935, see CHINA, DENMARK,

EGYPT, ETHIOPIA, FINLAND, FRANCE, GERMANY, GREECE, IRAQ, ITALY, JAPAN, LITHUANIA, PERSIA, POLAND, PORTUGAL, RUMANIA, SPAIN, SWEDEN, TURKEY, UNION OF SOVIET SOCIALIST REPUBLICS, and YUGOSLAVIA under *History*; LEAGUE OF NATIONS; MILITARY PROGRESS. For British relations with the Dominions, see AUSTRALIA, CANADA, INDIA, IRISH FREE STATE, NEW ZEALAND, RHODESIA, and SOUTH AFRICA under *History*.

GREAT PLAINS SHELTERBELT. See FORESTRY.

GREECE. A Balkan kingdom. Capital, Athens. With an area of 50,270 square miles (mainland, 41,652; islands, 8618), Greece had an estimated population on Jan. 1, 1934, of 6,620,000 (6,204,684 at the 1928 census). Living births in 1933 numbered 189,583; deaths, 111,447; marriages, 46,263. The estimated population of Athens in 1931 was 468,000. In 1928 Piræus (Peiræus) had 251,328 inhabitants; Salonika, 236,524; Patras, 61,278. The religious faith of the bulk of the population is Greek Orthodox.

Education. About 31 per cent of the population was illiterate in 1928. In 1931-32 there were 542 infant schools, with 30,631 pupils; 7703 primary schools, with 791,658 pupils; 428 high schools, with 65,217 pupils; and various vocational, professional, and special schools. Two universities in Athens had 6820 students and one at Salonika 962 students in 1932.

Production. About 54 per cent of the population is engaged in agriculture and fishing, 16 per cent in industry, and 8 per cent in commerce. Production of the chief crops in 1934, with 1933 figures in parentheses, was: Wheat, 26,800,000 bu. (28,400,000); barley, 9,600,000 bu. (10,500,000); corn, 7,800,000 bu. (10,700,000); oats, 7,150,000 bu. (9,250,000); tobacco, 44,000 short tons (60,000); currants, 260,000 short tons (150,000); sultana raisins, 25,000 short tons (30,000); wine must, 345,000 short tons (425,000); table grapes, 63,000 short tons (80,000); cotton, 80,000,000 lb. (69,000,000); olive oil, 120,000 short tons (116,000). Livestock in 1933 included 341,165 horses, 913,513 cattle, 7,427,129 sheep, 4,951,584 goats, 506,807 swine, and 169,473 mules.

The mineral and metallurgical output in 1933 was (in 1000 metric tons): Salt (state mines), 73; cement, 200 (248 in 1934); lignite, 99; pyrites, 184; iron ore, 85; lead (smelter), 8.2; zinc, 5.6; chrome ore, 14.8; sulphur, 89. The value of industrial production in 1933 was 7,238,000,000 drachmas (6,445,000,000 in 1932). In 1930 Greece had 77,000 industrial enterprises, utilizing a motive power of 350,000 horse power and employing 250,000 workers. Olive oil, textiles, chemicals, wine, foodstuffs, wool fabrics, etc., are the chief industrial products.

Foreign Trade. Imports for consumption in 1934 were valued at 8,792,417,000 drachmas (8,431,531,000 in 1933) and exports at 5,474,229,000 drachmas (5,141,066,000 in 1933). Calculated in U.S. dollars the respective totals were: Imports, \$82,649,000 (\$61,550,000 in 1933); exports, \$51,458,000 (\$37,530,000 in 1933). The value of the leading 1934 imports was (in 1000 drachmas): Wheat, 739,726; iron and steel, 674,998; chemicals and allied products, 649,615; machinery, 583,834; cotton piece goods, 446,267; coal, 412,998. The chief exports (in 1000 drachmas) were: Leaf tobacco, 2,027,385; currants, 1,103,877; raisins, 315,767; olive oil, 249,002. The United Kingdom supplied 16.7 per cent of the 1934 imports (14.4 in 1933); Germany, 14.7 (10.2); United States, 6.3 (5.8); France, 6.7 (4.3). Of the total exports, Germany purchased 22.4 per

cent (17.9 in 1933); United Kingdom, 17.4 (18.9); United States, 14.7 (12.5); Italy, 9.8 (14.0).

Imports in 1935 totaled 10,679,000,000 drachmas; exports, 7,028,000,000 drachmas. United States statistics for 1935 showed imports from Greece of \$9,977,113 (\$8,298,819 in 1934) and exports to Greece of \$6,577,091 (\$4,650,172 in 1934).

Finance. Actual budget receipts for the fiscal year ended Mar. 31, 1935, totaled 9,238,000,000 drachmas (8,468,000,000 in 1933-34) and actual payments were 8,749,000,000 drachmas (7,706,000,000 in 1933-34). Including 1934-35 revenues to be collected after the close of the fiscal year and funds due for disbursement on account of obligations assumed during 1934-35, the returns were: Receipts, 11,300,000,000 drachmas; expenditures, 10,840,000,000 drachmas.

The public debt at the close of 1934 amounted to approximately 44 billion drachmas, of which about 32 billions were borrowed abroad. Drachma exchange averaged \$0.0094 in 1934; \$0.0073 in 1933; and about \$0.013 in previous years.

Communications. Greece in 1935 had about 1668 miles of railway lines (823 miles operated by the state); nearly 9000 miles of highways; and air lines connecting Athens with Salonika and Epirus as well as with the capitals of Europe and the Near East. In 1933, 5806 steamers of 2,546,849 tons and 2057 sailing vessels of 42,585 tons passed through the Corinth canal. The gross steam- and motor-driven tonnage of the Greek merchant marine, amounting to 1,711,165 tons on June 30, 1935, rivaled that of Sweden for ninth place among the world's merchant fleets.

Government. The republican Constitution of June 3, 1927, provided that the President should be elected for five years by the Chamber and Senate. The Chamber at the beginning of 1935 comprised 248 members elected for four years by universal suffrage. Of the 120 Senators, 92 were elected by direct suffrage, 10 conjointly by the Chamber and Senate, and 18 by various economic groups. President, Alexander Zaimis, who was inaugurated Dec. 14, 1934, for a second successive term. For the overthrow of the republic in 1935, see *History*.

HISTORY

The 11-year struggle between republicans and royalists in Greece ended in a monarchist triumph on Oct. 10, 1935. The republic was abolished and the monarchy reestablished through a military coup d'état led by Gen. George Kondylis, the Minister of War, who became Premier and Regent pending the return of King George II. Restoration of the monarchy was confirmed by a plebiscite held November 3, and George II ended his 12-year exile by returning to Athens November 25.

The Civil War. The overthrow of the republic was a direct consequence of the military and naval revolt, inspired by former Premier Eleutherios Venizelos and engineered by republican military and naval officers in an effort to overthrow the Tsaldaris Government. Formerly an avowed monarchist, Panagiotis Tsaldaris had pledged his word during the 1933 political campaign that he would not overthrow the republican form of government if elected. After his Popular Party had smashingly defeated Venizelos's Liberals in the elections of Mar. 5, 1933, Tsaldaris held to his pledge but included in his Cabinet several extreme monarchists as well as two prominent military men—General Kondylis and Alexander Hadjikyriakos, Minister of Marine—who systematically weeded adherents of Venizelos out of the army and navy. The gov-

the ice. On Oct. 8, 1883, the expedition made camp at Cape Sabine, on the eastern shore of Ellesmere Land, east of Baffin Strait. During the winter of 1883-84 they lived on meagre rations amid untold hardship, and one by one the men died of hunger and cold. The darkest days began on Apr. 5, 1885. On July 22, Com. Winfield S. Schley of the United States Navy arrived off Cape Sabine heading a third relief party. He followed a trail which led to a collapsed tent under which were found the survivors of the expedition—seven in number. The tent had just recently collapsed but the men were too weak to lift it and they decided simply to wait for death.

Scientifically the Greely expedition made the nearest gravity observations to the pole, ascertained the climatic conditions of Grinnell Land, made glaciological studies, determined the hitherto unknown secular magnetic variation of that region, and through its tidal observations first disclosed the conformity of the sidereal day with the diurnal inequality of the tidal waves of the earth. Although primarily scientific, the explorations of the expedition covered unknown lands one-eighth the way round the globe north of the eighteenth parallel. The discoveries included the interior of Grinnell Land, the shores of the western polar sea, and the extension of Greenland to within 15 miles of its extreme northern latitude. The attainment of Lockwood and Brainerd wrested from England an honor held for three centuries; it was the only world's record verified by a later explorer. For his services, Greely was awarded the founder's medal of the Royal Geographical Society and the Roquette medal of the Société de Géographie of Paris. On Mar. 27, 1935, 50 years after the Expedition, he was awarded the Congressional Medal of Honor by the United States Government.

Lieutenant Greely was promoted to captain in 1886, and the following year assigned to active duty, when President Cleveland appointed him a Brigadier-General to succeed Gen. William B. Hagen as head signal officer. He was the first volunteer soldier of the Civil War to reach this rank. During the Spanish-American war, General Greely was in command of all the signal operations and laid thousands of miles of telegraph wires in Cuba and Puerto Rico, and subsequently, in the Philippines. In 1900 he was sent to Alaska to install 4000 miles of telegraph wires, submarine cables and wireless communications. In 1904 he served as a member of the board to regulate wireless telegraphy in the United States, in the previous year having been the United States delegate to the International Telegraph Conference at London and the International Wireless Telegraphy Congress at Berlin. At the time of the San Francisco earthquake and fire on Apr. 18, 1906, he was commander of the Pacific division of the Army and as such had charge of the relief operations there. Two years later he was retired for age. He represented President Taft at the coronation of King George V, in 1911.

General Greely was one of the founders of the National Geographic Society in 1887, and served continuously as a director from 1888. He was a frequent contributor to the Society's magazine and a lecturer at its meetings. His themes covered many subjects, including American discoverers of the Antarctic continent, economic evolution of Alaska, the geography of the Arctic, and accounts of his own Arctic Expedition. He presented to the Society his valuable collection on the Arctic, included in which were 286 volumes of scrapbooks

compiled by him and covering all phases of general polar exploration.

He contributed the article "Polar Research" to the second edition of THE NEW INTERNATIONAL ENCYCLOPEDIA; the articles "Exploration," "Polar Research," and "Alaska" to the NEW INTERNATIONAL ENCYCLOPEDIA SUPPLEMENT, and the article on "Exploration and Polar Research" to the NEW INTERNATIONAL YEAR BOOKS, 1914-27; and wrote *Three Years of Arctic Service* (2 vols., 1885); *American Weather* (1890); *American Explorers and Travelers* (1894); *Handbook of Polar Discoveries* (1896, 5th ed., enlarged, 1910); *Handbook of Alaska* (1912; new ed., enlarged, 1914); *Reminiscences of Travel and Adventure* (1927); *Polar Regions in Twentieth Century* (1928); and numerous reports of much value, among which are: *Diurnal Fluctuations of Barometric Pressure* (1891); *Proceedings of the Lady Franklin Bay Expedition* (1888); *Rainfall of Western States and Territories* (1888); *Discussion of International Simultaneous Meteorological Observations, 1878-87* (1891); and *Climatology of Arid Regions* (1891). He also compiled *Public Documents of the First Fourteen Congresses, 1784-1817* (1900).

GREENLAND. A Danish Arctic colony, second in size among the islands of the world. Area, 836,518 square miles, of which 705,234 square miles comprise the central ice-capped plateau. Population in 1934, about 16,600 Eskimos and 400 Danes. Chief settlements are Julianehaab (3530 inhabitants), Godthaab (1313), Godhavn, and Angmagssalik. Trade is a monopoly of the Danish Government and is chiefly in cryolite, furs, skins, and oil. In 1933 imports from Denmark were valued at 2,143,000 crowns and exports to Denmark at 4,064,000 crowns (1 crown exchanged at \$0.1907 in 1933). The colony is administered by a director in Copenhagen, Denmark.

GRENADA, grē-nā'da. A British colony in the Windward Islands. Area (including South Grenadines, 13 sq. m.), 133 sq. miles; population (Jan. 1, 1935), 83,888. St. George's, the capital, had 4629 inhabitants in 1921.

Production and Trade. Cacao, nutmegs, mace, lime, sugar, cotton, and coconuts were the main products. In 1934, imports were valued at £246,862, exports, £218,850 of which cacao accounted for £100,743; nutmegs, £48,778; mace, £25,103; lime oil, £6862; cotton, £5399.

Government. During the year 1934, revenue amounted to £143,498; expenditure, £153,778; net public debt, £200,602. Grenada was under the Governor of the Windward Islands, whose headquarters were at St. George's, Grenada, but it had its own legislative council. During the absence of the Governor from Grenada the Colonial Secretary becomes Administrator. See WINDWARD ISLANDS.

GRINDING. See GARBAGE AND REFUSE DISPOSAL.

GRINNELL COLLEGE. A coeducational, nonsectarian institution of higher learning in Grinnell, Ia., founded in 1846. The enrollment for the year 1935 was 778. There were 62 faculty members. The productive funds amounted to \$2,081,200. The library contained 95,000 volumes. A new department of sociology was established. President, John Scholte Nollen, Ph.D.

GROSSMITH, GEORGE. An English actor and manager, died in London, June 6, 1935, where he was born May 11, 1874. The son of the actor, George Grossmith, he was educated at University College, London, subsequently studying in Paris. His stage début was made in 1892 at the Criterion

when he appeared in the operetta *Haste to the Wedding*, which was written by his father and Sir W. S. Gilbert. His first success was in *Morocco Bound*, which he played the following year. From that time on he appeared in various musical shows, including *A Gaiety Girl* (1894); *The Shop Girl* (1894); *A Night Out* (1896); *The Vagabond King* (1897); *Great Caesar*, of which he was part author, (1899). In 1899 he appeared, both in England and America, with Mrs. Langtry in *The Degenerates*. Returning to England in 1900 he played in *The Gay Pretenders*, of which he was also part author, and in the following year he went on tour, returning to London in June to appear in *The Toreador*. He then appeared in various parts on the London stage, and in 1904-05 toured America with Edna May in *The School Girl*.

His return to the London stage was made in 1905 in *The Spring Chicken*, and he played various rôles in musical comedy until 1910, when he appeared in the Folies Bergères, Paris and in the Théâtre Rejane there in the following year. In 1913 he again appeared in New York in *The Girl on the Film*. In the following year he returned to England, and in association with Edward Laurillard produced *Potash and Perlmutter*. He himself appeared in the revue *Not Likely at the Alhambra* in 1914, and in December of that year returned to New York where he played the rôle of the Hon. Dudley Mitten in *To-Night's the Night*, also produced with Laurillard. In 1915 he played the same part in the London production. His next producing venture was *On Trial*, which he and Laurillard presented at the Lyric in April, 1915. Five years later this partnership was dissolved. On May 7, 1915, Grossmith delivered the Prologue in the "all star" production of *King Henry VIII* given for King George's Actors' Pension Fund, and during the following year played Lord Brocklehurst in *The Admirable Crichton* for various charities.

During the War he served as a lieutenant in the Royal Naval Volunteer Reserve and the Royal Navy Armoured Cars, and at the close of the War he returned to the stage as Max Touquet in *Kissing Time* (1919). From that time on he played in various successful musical comedies, including *Sally* (1921); *The Gay Lord Quex* (revival, 1923); *To-Night's the Night* (revival, 1924); *No, No, Nanette* (1925); *Princess Charming* (1926); and *The Five O'Clock Girl* (1929). In 1925 the firm of Grossmith and Malone, Ltd., which had been formed after the break with Laurillard, was dissolved, and in 1927 he became the lessee of the Strand Theatre. He retired from the stage in 1929, and until 1931 devoted his time to the cinema. He appeared in the American productions of *Women Everywhere*, *Three French Girls*, *Are You There?*, and *Reserved for Ladies*, all in 1930. He became managing director of the Theatre Royal, Drury Lane, in the following year, but resigned in 1932 to become associated with Alexander Korda in the formation of the London Film Productions. In that year he appeared in *Wedding Rehearsal* and *The Girl from Maxim's*, as well as in other British and French productions. He served also as advisory director of programmes for the British Broadcasting Company. In 1933, he played Touchstone in *As You Like It* at the outdoor theatre in Regent's Park.

Mr. Grossmith was long famous for his impersonation of a "dude," a type of rôle he played successfully on the stage for years, and he was

credited with introducing the Revue into England. Many of his musical works of this type were presented at the Alhambra and Empire Theatres, and to his credit were a long list of musical comedies. He was the recipient of several decorations, and in 1933 his memoirs, *G.G.*, appeared.

GADELOUPE, ga'de-loop'. A French West Indian colony comprising the main islands of Guadeloupe (Basse-Terre) and Grande-Terre, and the dependent islands of Les Saintes, Désirade, St. Barthélemy, St. Martin, and Marie Galante. Total area, 688 sq. miles; population (1932), 267,407. Basse-Terre, the capital (on the island of Guadeloupe), had 9268 inhabitants in 1932; Pointe-à-Pitre, 30,465.

Production and Trade. Sugar (40,954 metric tons in 1933), coffee, cacao, rum, vanilla, logwood, bananas, and manioc were the main products. In 1933, imports were valued at 150,200,000 francs; exports, 188,200,000 francs (franc averaged \$0.0501 for 1933). The United States supplied \$2,787,686 of the imports and received \$183,081 of the exports during 1934.

Government. The budget for 1932 was balanced at 66,220,864 francs; public debt (Jan. 1, 1933), 3,812,282 francs. The colony was administered by a governor aided by an elected council, and was represented in the French Parliament by a senator and two deputies.

GUAM. An insular possession of the United States; the largest and most populous island in the Marianas group in mid-Pacific Area, 210 square miles; population on June 30, 1935, 20,899 (including 19,455 natives, 754 non-natives, and 690 members of the naval establishment). Capital, Agaña, with an estimated population of 12,000 on June 30, 1935.

Primary education is free and compulsory. The school enrollment for 1934-35 was 4176 in 32 primary schools, 1 junior high school, 1 evening high school, and 8 other vocational and special schools. The languages spoken are English, Spanish, and Chamorro. Copra, coconut oil, alligator pears, and kapok are exported and cacao, coffee, corn, rice, sugar, sweet potatoes, and fruit are grown for home consumption. Copra production in the fiscal year ended June 30, 1935, totaled 3,618,910 lb., valued at \$72,440. Imports in 1934-35 were valued at \$586,336; exports, \$87,105. Government revenues were \$186,563; expenditures, \$161,258. A total of 42 vessels entered and cleared Apra Harbor during 1933-34.

Guam is a United States naval station, of which the Governor, who is a naval officer appointed by the President, is commandant. There is a native Congress, with advisory powers. Governor in 1935, Capt. George A. Alexander, U.S.N. Guam's long isolation from the currents of world commerce was ended on Nov. 27, 1935, when a great transpacific airliner arrived at Apra Harbor on its first flight inaugurating regular airmail service between Alameda, Calif., and Manila in the Philippines. The liner covered the 6602 miles from the United States to Guam in four days, including stops at Honolulu and Midway Island. An active programme of agricultural development to make Guam more self-sustaining was carried out under the direction of the naval government in 1935.

GUATEMALA, gwa'tā-mā'la. A republic in Central America. Capital, Guatemala City.

Area and Population. With an area of 45,452 square miles, Guatemala had an estimated population on Mar. 31, 1934, of 2,245,593 (2,004,900 at the 1920 census). The bulk of the population is either

pure Indian or of mixed Spanish and Indian blood, but the small ruling class is largely of European descent. Births in 1934 numbered 92,205; deaths, 60,051. The estimated populations of the chief cities on Mar. 31, 1934, were: Guatemala City, 134,400; Quezaltenango, 30,125; Coban, 26,774; and Zacapa, 18,094. In 1933-34 there were 2066 primary schools, with 95,350 pupils; 16 secondary schools, with 20,620 pupils; and the University of Guatemala at the capital. The population is about 80 per cent illiterate.

Production. Agriculture is the main support of the population and coffee and bananas normally account for more than 90 per cent of the total exports. Sugar, corn, wheat, rice, and potatoes are the other chief crops. Coffee production in 1934-35 was about 193,754,137 lb. (106,041,000 lb. in 1933-34). Banana exports in 1934 totaled 5,367,366 bunches. The 1933-34 sugar crop was 32,500 metric tons. Livestock in 1932 included 369,253 cattle, 165,631 sheep, 65,136 horses, and 89,416 swine. The forests yield chicle gum, hardwoods, and dyewoods. Mining is but little developed due to lack of transport facilities. Industrial establishments are confined largely to coffee-cleaning plants, flour and sugar mills, and shoe, soap, and pottery factories.

Foreign Trade. Imports in 1934 (exclusive of freight and insurance costs) were valued at \$8,073,104 (\$5,340,735 in 1933) and exports at \$14,808,464 (\$9,327,102 in 1933). The chief exports were coffee, bananas, hides, chicle, and honey. In 1934 the United States took 33.7 per cent of the value of all exports (34.3 in 1933) and furnished 50.8 per cent of the imports (51.0 in 1933). Germany supplied 11.5 per cent of the imports and took 37.8 per cent of the exports; Great Britain's share was 9 and 2.3 per cent, respectively.

Imports in 1935, excluding freight and insurance, totaled \$9,599,025 and exports were \$12,471,326. United States figures showed imports from Guatemala in 1935 of \$6,144,435 (\$4,542,552 in 1934) and exports to Guatemala of \$3,917,373 (\$4,069,756).

Finance. Government revenues in the fiscal year 1933-34 totaled 8,602,933 quetzales (8,265,998 in 1932-33) and expenditures were 8,440,464 quetzales (8,592,065 in 1932-33). Budget estimates for 1934-35 balanced at 8,945,184 quetzales; those for 1935-36 at 9,083,300 quetzales. The public debt on Dec. 31, 1934, totaled 14,857,000 quetzales, exclusive of £1,491,000 of the 4 per cent sterling debt outstanding.

Communications. The railway mileage in 1933 was 737, of which 652 miles represented lines of the International Railways of Central America. Highways extended 2523 miles and air lines connected Guatemala City with Quezaltenango, Puerto Barrios, Coatepeque, Flores, Coban, and various other Central American points. The chief ports are Puerto Barrios and Livingston on the Atlantic and San José and Champerico on the Pacific. The first telephone line between Guatemala and El Salvador was opened on Sept. 15, 1935.

Government. The Constitution of Jan. 1, 1928, provided for a President, elected for six years and ineligible for reelection for 12 years afterwards; a single-chambered National assembly, with 69 members in 1935; and a Council of State of 7 members (3 elected by the National Assembly and 4 appointed by the President) which supervises public contracts and concessions. President in 1935, Gen. Jorge Ubico, who assumed office Feb. 14, 1931.

History. President Ubico, who in 1934 had crushed opposition to his régime by wholesale executions and arrests, tightened his increasingly arbitrary

grip upon the country during 1935. With nearly two years of his term still to be served, the President early in the year took steps to insure his continuance in office, despite the provision of the Constitution making the incumbent in the presidency ineligible for reelection for 12 years. On May 5 Ubico's Liberal Progressive Party by the usual governmental manipulation and pressure won a majority of the seats in a convention called to revise the Constitution. The convention, which met on May 15, annulled the constitutional bar to the President's reelection and then held a "plebiscite" in which the voters were reported to have approved overwhelmingly the extension of Ubico's term for six years. Illustrative of Ubico's steady militarization of the country was a decree issued in September placing all telegraph, telephone, and radio communications under the War Department and providing that all employees of these utilities must be enlisted in the army.

The underground opposition against the Ubico Government continued, despite these measures. In April Congress passed legislation imposing more severe penalties for bombing and other terroristic crimes. In May 12 persons were arrested and charged with complicity in another plot against the President. Ubico's agents also brought extradition proceedings against some of his opponents who took refuge in neighboring states.

In January, 1935, the Ubico administration adopted a drastic trade-balancing policy. A decree provided for a 100 per cent increase in the tariff on imports from countries which increased their shipments to Guatemala by 100 per cent in any year (calculating 1934 as the basic year), unless such countries purchased an equivalent value of Guatemalan coffee. This policy was an answer to Germany's trade balancing policy inaugurated in 1934. Germany purchased only 7.84 per cent of Guatemala's coffee exports in the period Sept. 1 to Dec. 31, 1934, as compared with 42.43 per cent in the corresponding period of 1933. In May Congress approved the President's proposal to consolidate the foreign debt by means of bonds bearing 2 per cent interest for five years and 3 per cent thereafter, with a 2 per cent annual amortization, all bonds to be retired in 33 years.

See SALVADOR, EL, under *History*.

GUFFEY-SNYDER BITUMINOUS COAL ACT. See UNITED STATES under *Congress*.

GUIANA. See BRITISH GUIANA; FRENCH GUIANA and ININI; SURINAM.

GULF-ATLANTIC SHIP CANAL. See CANALS; FLORIDA.

GUTHRIE, WILLIAM DAMERON. An American lawyer, died in Lattington, L. I., Dec. 8, 1935. Born in San Francisco, Calif., Feb. 3, 1859, he was educated in France and England, and from 1879 to 1880 studied at the Columbia University Law School, being admitted to the New York bar in the latter year. He was admitted to the firm of Blatchford, Seward, Griswold, and Da Costa in 1884, which eventually became, in 1902, Guthrie, Cravath & Henderson. He retired from this firm in 1905, and four years later formed the partnership of Guthrie, Bangs, and Van Sinderen, which continued until 1922, when the firm of Guthrie, Jerome, Rand, and Kresel was formed. He retired from general practice in 1934.

During the course of his career, Mr. Guthrie argued many cases before the U.S. Supreme Court, including the income tax, California irrigation, Illinois inheritance tax, oleomargarine, and the

Kansas City stockyard rate cases. Shortly after the World War, he served as a special deputy Attorney-General for the State of New York in the litigation before the Supreme Court concerning the State's emergency housing laws. In 1925, he won the Oregon School law case, which would have put parochial schools in that State under the public school system; served as special counsel for the Brooklyn-Manhattan Traction System, 1927, and in the following year was retained by the Interborough Rapid Transit Company to press the 7-cent fare. In 1929 he was engaged as special adviser to Gov. Franklin D. Roosevelt in his conflict with the New York State Legislature over the state finance law and budget act. The State Court of Appeals unanimously upheld his construction of the budget act. His plan of repeal of the 18th Amendment to the Constitution was accepted by the Republic National Convention for submission to Congress in 1932, and in 1935, he was instrumental in the defeat of the Child Labor Amendment at Albany, New York.

Mr. Guthrie also was interested in education, and from 1907 to 1908 was Storrs lecturer at Yale, and from 1909 to 1922 was Ruggles professor of constitutional law at Columbia University. Also, from 1921 to 1923 he served as president of the New York State Bar Association.

For his services to France he was made a Grand Officer of the Legion of Honor, and for his efforts on behalf of the Roman Catholic Church he was made a Commander of the Order of St. Gregory, and a Master Knight of the Sovereign Order of Malta. Besides writing on political and legal topics, he published *Lectures on the 14th Amendment to the Constitution* (1898), and *Introduction to American Constitutional Law* (1913).

GYMNASTICS. The close battle for the national all-around championship between two Olympic team members, Fred Meyer of the New York Turn Verein and Frank Cumiskey of the Swiss Turn Verein, was the bright spot in 1935 gymnastics. Meyer dethroned Cumiskey, 312.9 points to 311.4. Each garnered two individual titles, also, Meyer on long horse and parallel bars, and Cumiskey in calisthenics and on the horizontal bar. George Gulak won the flying rings event, displacing Arthur Gilmore, three-time victor. The team honors went to the Swiss Turn Verein.

Miss Thera Steppich, of Long Island City, took the women's championship at the tournament held in conjunction with the men's. Miss Steppich dethroned Miss Consetta Caruccio of Baltimore.

HADRAMAUT. See under ARABIA.

HAITI, ha'ti. A West Indian republic, occupying the western third of the island of Haiti or Hispaniola. Capital, Port-au-Prince.

Area and Population. With an estimated area of 10,204 square miles, Haiti had a population of about 2,600,000 on Jan. 1, 1934. The population, with the exception of some 3000 white foreigners, is entirely Negro and mulatto. The chief towns, with their estimated populations, are: Port-au-Prince, 80,000; Cap Haitien, 12,500; Aux Cayes, 12,500; Gonaives, 10,000; St. Marc, 8000; Jacmel, 7500. French is the language of government and the upper class; the peasants speak a dialect known as Creole French. The Roman Catholic religion prevails, most of the priests being Frenchmen. There are about 1060 primary schools, with 87,000 pupils; 21 secondary schools, with 6000 pupils; 68 farm schools, with 12,200 pupils; and university

courses in law, medicine, applied science, and agriculture.

Production. The prosperity of the country depends largely upon coffee, which is the main money crop. Coffee exports in the fiscal year ended Sept. 30, 1935, totaled 41,870,400 lb., valued at \$3,818,418 (74,861,600 lb., valued at \$7,286,686, in 1933-34). Cotton exports in 1934-35 were 13,590,612 lb., valued at \$1,533,327; raw sugar, 71,626,407 lb., valued at \$692,257; sisal, 4983 metric tons, valued at \$405,881; bananas, 519,719 bunches, valued at \$152,651; cacao, 2,527,536 lb., valued at \$81,592. Logwood, rum, honey, pineapples, goatskins, and corn are produced for export also. The principal manufactured products are refined sugar, alcohol, rum, tobacco products, vegetable lard, and canned fruit.

Foreign Trade. Imports in the year ended Sept. 30, 1935, amounted to 41,161,621 gourdes (one gourde equals \$0.20), compared with 45,685,208 gourdes in 1933-34. Exports totaled 35,629,205 gourdes (\$1,546,191 in 1933-34). The quantity and value of the chief export items are listed under *Production*. The value of the chief import items in 1934-35 was (in 1000 gourdes): Cotton goods, 11,505; wheat flour, 3269; iron and steel and their manufactures, 2860; machinery, etc., 2235; fish, 1610. Of the 1934-35 imports, the United States supplied 48.39 per cent; the United Kingdom, 9.6; and France, 5.49 per cent. France purchased 39.55 per cent of the 1934-35 exports (chiefly coffee); the United Kingdom, 22.33 per cent; the United States, 12.07 per cent.

Finance. For the fiscal year 1934-35, government receipts totaled 30,091,641 gourdes (customs duties, 24,314,959 gourdes) and expenditures were 42,355,011 gourdes, leaving a deficit of 12,263,370 gourdes. For the preceding year, receipts were 36,752,165 gourdes, expenditures 36,802,276, and the deficit 50,110 gourdes. The operating deficit in 1934-35 was met entirely from reserves in the form of cash and investments. The unobligated Treasury surplus was reduced from 15,535,000 gourdes on Sept. 30, 1934, to 3,867,000 gourdes on Sept. 30, 1935. The gross public debt fell from 60,830,000 gourdes on Sept. 30, 1934, to 54,931,000 gourdes on Sept. 30, 1935.

Communications. Haiti's communication and transportation system includes 158 miles of railway line, 1075 miles of highways (including 935 miles of motor roads), air services to North and South America and to the other Caribbean islands, and a government-owned telegraph and telephone system.

Government. A new Constitution went into effect on June 17, 1935, following its ratification at a plebiscite held June 2. The discarded Constitution of July 21, 1932, had provided for a President elected for six years by Parliament and ineligible for reelection; a Senate of 20 members chosen for six years by electoral colleges, and a Chamber of Deputies of 36 members, elected for four years by popular vote. The new Constitution made the presidential term five years and by a special provision extended the term of office of President Stenio Vincent for five years beginning May 15, 1936. In subsequent presidential elections, Parliament was to designate three candidates from among those formally seeking the office and the people were then to choose one of the three candidates through primary electoral assemblies in each commune.

In the new Parliament there were to be 37 deputies elected by universal suffrage for four years and

21 senators, of whom 10 were to be appointed by the President and the other 11 by the Chamber of Deputies for six years. Terms of the existing members of Parliament were extended to permit them to hold office through the year 1936. The new Constitution made ownership of property a requisite for election to the presidency or for membership in Parliament. The powers of the executive were strengthened at the expense of the legislative and judicial branches. Safeguards thrown around the citizen's civil and political rights by the 1932 Constitution were omitted; the communes, which had formerly been declared autonomous, were placed under the Executive's direct control, and only taxpayers were permitted to vote on local questions; popular ratification of amendments to the Constitution made by Parliament was declared necessary before they could become valid. For a more detailed summary of the Constitution, consult the *Bulletin of the Pan American Union*, October, 1935, p. 799-804.

History. The new Constitution proclaimed June 17, 1935 (see *Government*), consolidated the victory of the conservative, pro-Government bloc in Parliament over the radical, anti-Government group. This conflict came to a head late in 1934 when the opposition majority group of 11 radicals in the Senate refused to ratify the American-Haitian agreement negotiated by Presidents Vincent and Roosevelt in Washington on Apr. 16, 1934 (see 1934 NEW INTERNATIONAL YEAR BOOK, p. 289-290). The radicals objected particularly to the terms for the purchase by the Haitian Government of the *Banque Nationale d'Haiti*, a subsidiary of the National City Bank of New York. The agreement called for appointment of a majority of Americans to the bank directorate pending retirement of the Haitian foreign debt in 1944. Partisan hostility to President Vincent apparently played a part also.

President Vincent ended the deadlock in Parliament by submitting the question of the purchase of the *Banque Nationale d'Haiti* to a plebiscite on Feb. 10, 1935. The vote was 454,357 in favor of the proposal and 1172 against it. The opposition Senators, who had denounced the plebiscite as illegal, still refused to ratify the bank agreement. President Vincent then had them expelled from their seats and the Chamber of Deputies on February 23 elected 11 pro-Government Senators to succeed them. These developments gave rise to opposition charges that President Vincent was the tool of American financial interests and of the Washington Government. Nevertheless the sale of the *Banque Nationale d'Haiti* was consummated on July 9, 1935, in accordance with the agreement of Apr. 16, 1934.

During the year the Haitian Government concluded important trade treaties with the United States and France. The American-Haitian treaty, signed in Washington March 28, provided for substantial reductions in Haitian tariff rates on American electrical machinery, radios, automobiles, meat, and various agricultural products. In return the United States agreed to retain on its free list the chief Haitian export products, especially coffee, cacao, sisal, logwood, and bananas. The American duty on Haitian rum and fruits was lowered. The agreement was to remain in force at least three years. The signing of a new Franco-Haitian commercial agreement, guaranteeing continuance of the important French market for Haitian coffee, ended fears that this market would be lost as a

result of the expiration of a previous Franco-Haitian convention on May, 26, 1935.

A law published Oct. 23, 1935, prohibited foreigners and naturalized Haitians from engaging in the sale of a long list of merchandise at retail and limited their activities as wholesale merchants to the larger towns. Scheduled to go into effect Feb. 1, 1936, the law was designed to eliminate Syrians and other foreigners who had secured a virtual monopoly of merchandising. On Aug. 30, 1935, President Vincent signed a contract with a French construction company for a five-year public works programme, to be paid for by a 40-year loan in the sum of 500,000,000 francs.

Economic conditions in Haiti were extremely depressed during 1935, due to low prices for coffee and other export commodities. The depression was reflected in the serious budget deficit for the 1934-35 fiscal year (see *Finance*). The 1934-35 coffee crop was the smallest recorded since 1914-15. However the depressed condition of the coffee industry was offset in part by the rapid expansion of the banana industry and the higher prices for sisal and cotton. A hurricane which swept over Haiti's southern peninsula late in October was reported to have cost 2000 lives and caused extensive property damage.

For the settlement of the Dominican-Haitian boundary dispute on Feb. 27, 1935, see DOMINICAN REPUBLIC under *History*.

HAMBURG, STATE OF. See GERMANY.

HAMILTON COLLEGE. A nonsectarian institution for the higher education of men in Clinton, N. Y., founded in 1812. A total of 481 students was registered for the 1935 autumn session. There were 45 members of the faculty for the year 1935-36. The productive funds of the college were approximately \$4,123,000 and the income for the year 1934-35 was \$356,000. The library contained 166,572 volumes, and 34,300 pamphlets. President, Frederick C. Ferry, Ph.D.

HAMPTON INSTITUTE. An institution founded in 1868 at Hampton, Va., for the education of Negroes. The enrollment for the autumn term of 1935 was 572 men, 440 women, total 1012, while that for the summer school was 83 men, 498 women, total 581. The faculty numbered 125. The endowment for the fiscal year ending June 30, 1935, was \$10,214,571, from which the income was \$521,700. Gifts to the endowment and investment funds amounted to \$16,316. There were 55,400 volumes in the library. President, Arthur Howe.

HANDBALL. Champions experienced a miserable handball campaign in 1935, five of the 1934 holders falling in the year. Of the holders of the six national senior titles only the Trinity Club's one-wall doubles combination of Dan Levinson and Dave Margolis repeated. Husky Joseph P. Platak, of Chicago, dethroned Sam Atcheson, of Memphis, to win the four-wall singles championship and a pair of 200-pounders, Andrew Barry and Joe Gordon, traveled all the way from Los Angeles to Washington, D. C., scene of the championships, to take the four-wall doubles crown, conquering Johnny Endzwick and Joe Goudreau, of Cleveland, in the final.

In four-wall competition, Angelo Trulio, former national champion, won the New York State singles title for the sixth consecutive year, but was eliminated in the first round of the Metropolitan tournament by Bob Ford, an unranked competitor, who won the championship. In the one-wall game, Jack Londin, of the Trinity Club, defeated Margolis in the national singles laurels. Margolis defeat-

ed London in the final of the New York State tournament later in the year. Cy Alexander and Saul Schmookler, also of the Trinity Club won the New York State doubles titles and Miss Miriam Sperber was victor in the Metropolitan women's one-wall championship tournament.

New champions were also crowned in the hard-ball game, when Eric Peet of the Brooklyn Central Y. M. C. A. won the singles title and James V. and William Ryan of the Brooklyn Handball Club won the doubles award.

HANDEL, GEORGE FREDERICK. See **MUSIC**.

HAPSBURGS. See **AUSTRIA** and **HUNGARY** under *History*.

HARBORS. See **PORTS** and **HARBORS**.

HARVARD UNIVERSITY. A nonsectarian institution of higher education for men in Cambridge, Mass., founded in 1636. The number of students enrolled for the year 1935-36 was 7871. Of the 3727 registered in the college 721 were seniors, 842 juniors, 1012 sophomores, 1091 freshmen, and 61 out-of-course. Those in the graduate schools were distributed as follows: arts and sciences, 736; business administration, 746; and education, 202. The professional schools reported the following registrations: engineering (undergraduate and graduate), 110; divinity, 61; law, 1466; medicine, 529; dentistry, 156; public health, 32; architecture, 48; landscape architecture, 19; city planning, 11; special students, 28. For the summer session of 1935, the registration was 1637. The officers of instruction and administration for 1935-36 numbered 1822, of whom 280 were professors, 81 associate professors, 157 assistant professors, and 22 clinical professors.

Among visiting professors and lecturers for 1935-36 are: The Most Reverend William Temple, Archbishop of York, who comes as William Belden Noble Lecturer on Religion; Corrado Gini, professor of statistics and biometrics at the Royal University, and director of the Royal Institute of Statistics, both of Rome, Italy, who comes as lecturer on sociology for the second half-year; Charles Cestre, professor of American literature and civilization at the Faculté des Lettres, Paris, who comes as exchange professor from France for the first half-year; Karl Vietor, professor of German philology at the University of Giessen, Germany, who comes as Kuno Francke Professor of German Art and Culture during the first half-year; Lars Valerian Ahlfors, adjunct professor of mathematics at the University of Helsingfors, Finland, who comes as lecturer and tutor in mathematics throughout the year; Leonard Carmichael, professor of psychology and director of the Psychological Laboratory, Brown University, who comes as lecturer on psychology during the first half-year; Oliver Peter Field, professor of government at the University of Minnesota, who comes as lecturer and tutor in government throughout the year; Rudolph Ernest Langer, professor of mathematics at the University of Wisconsin, who comes as lecturer and tutor in mathematics; Herbert Jennings Rose, professor of Greek at the University of St. Andrews, Scotland, who comes as visiting lecturer on Latin during the first half-year; Robert Ulich, professor of philosophy at the Technische Hochschule, Dresden, will remain at Harvard in 1936 as lecturer on comparative education.

Endowment funds of the University in June, 1935, exclusive of land and buildings used for educational purposes, had a book value of \$128,827,068. Total expenses of the year for instruction,

research, and administration were \$9,527,120. Gifts for the year ending June, 1935, totalled \$2,375,494. The library contained 3,696,610 volumes and pamphlets. President, James Bryant Conant, Ph.D., LL.D.

HASSAM, CHILDE. An American artist, died at East Hampton, L. I., Aug. 27, 1935. Born in Dorchester, Mass., Oct. 17, 1859, he received his early training at the Boston Art School and subsequently studied in Paris under Boulanger and Lefebvre. His first work was sketching for newspapers, and his first exhibited work was shown in the National Art Gallery in 1883.

From the first he allied himself with the impressionistic movement and freshness of color ever remained a mark of his work. He evolved a system of his own, composed of primary colors juxtaposed in parallel stripes and dashes, the whole giving a remarkably vibrant and brilliant effect. His work was found to be suffused with light and increasing movement. A passion for living things was characteristic of him, and with an unlimited knowledge and power of execution, his intellectual appreciation of a subject made it worthy of study. His range of subject matter was wide—street scenes, landscapes, with and without nudes, interiors with figures—and often bizarre. During the War he made what were known as his flag pictures of Fifth Avenue, in which he caught the exultant spirit of flowing banners, as in "Allies Day." In later years he devoted much of his time to etching, which was notable for its reticence and subtlety, although he regarded painting as his chief occupation.

Early in his career he became associated with the Society of American Painters, but broke away to found, with Twachtman, Alden, Weir, and others, the Ten American Painters. In 1906 he was elected to the National Academy of Design. Other associations with which he was allied were the Société Nationale de Beaux Arts, Paris; the Secession, Munich; American Water Color Society; National Institute of Arts and Letters, and the American Academy of Arts and Letters.

He was the recipient of many awards including the Webb prize, Society of American Artists (1895); medal, Carnegie Institute, Pittsburgh (1898); Temple gold medal, Pennsylvania Academy of Fine Arts (1899); gold medal, St. Louis Exposition (1904); Thos. B. Clark prize, National Academy (1905); gold medal, Carnegie Institute (1905); Carnegie prize, Society of American Artists (1908); Walter Lippincott prize, Pennsylvania Academy (1906); Jennie Sesnan prize, Pennsylvania Academy (1910); third W. A. Clark and Corcoran bronze medal, Corcoran Gallery (1911); first W. A. Clark prize and gold medal (1913); Altman Prize, National Academy of Design (1918); Hudnut prize, American Water Color Society (1919); gold medal of honor, Pennsylvania Academy (1920); Pennell Medal, Print Club, Philadelphia (1931); Medal, American Art Dealers Association (1934); John Elliott Memorial Prize, "for the greatest poetic imagination," Newport Art Club (1935).

His work is to be found in many art museums in the United States and abroad. His works include: "The Brush House and Street in Portsmouth, New Hampshire," "Colonial Church at Gloucester," "14th July Rue Daunou, Paris," all in the Metropolitan Museum of Art, New York; "Church at Old Lyme" in the Fine Arts Academy, Buffalo; "Cat Boats—Newport" in the Pennsylvania Academy, Phila.; "Contre-Jour," Art Institute, Chicago; "Avenue of the Allies" at the Lux-

embourg, Paris, and the Gellatly Collection of 18 drawings in the National Gallery, Washington.

HAUPTMANN, BRUNO R. See LAW; NEW JERSEY.

HAVERFORD COLLEGE. An institution of higher education under the control of the Society of Friends in Haverford, Pa., founded in 1833. Registration for the autumn term of 1935 totaled 328 students. There were 43 members on the faculty. The productive funds of the institution amounted to \$4,090,000 (book value). The library contained 132,000 volumes. During the year, the Emma Ridgway Comly Fund of \$50,000 and the Ellen W. Lonsgreth Fund of \$20,000 were received by the College. President, William Wistar Comfort, Ph.D., Litt.D., LL.D.

HAWAII, ha-wi'e. A group of islands in the Pacific 2809 miles southwest of San Francisco, forming a Territory of the United States. Capital, Honolulu.

Area and Population. Hawaii has an area of 6407 square miles and a population estimated on June 30, 1935, at 384,437 (368,336 at the 1930 census). Populations of the main inhabited islands in 1930 were: Oahu, 202,887; Hawaii, 73,325; Maui, 48,756; Kauai, 35,806; Molokai, 5032; and Lanai, 2356. The estimated population of Honolulu on June 30, 1935, was 143,590; of Hilo, 15,663. The 1935 population was divided racially as follows: Japanese, 148,972; Filipinos, 54,668; Portuguese, 29,550; Chinese, 27,264; Hawaiian, 21,710; Caucasian-Hawaiian, 18,742; Asiatic-Hawaiian, 17,236; Puerto Rican, 7368; Korean, 6668; other Caucasians, 50,258; Spanish, 1267; others, 754. Of the 384,437 inhabitants, 291,645 were citizens and 92,792 aliens. Living births in 1934-35 numbered 9252; deaths, 3236 (the death rate of 8.42 per 1000 was the lowest recorded for the Territory).

Education. On June 30, 1935, there were 184 public schools, with 2674 teachers and 83,319 pupils. Private schools on Dec. 31, 1934, numbered 80, with 595 teachers and 13,130 pupils. Of the public school pupils, 99 per cent were citizens. Enrollment in the University of Hawaii at Honolulu for 1934-35 totaled 1984, including 1259 candidates for degrees. The summer school enrollment was 1126. The cost of public education during 1934-35 was \$5,010,516.

Production. The value of the chief agricultural products in 1934 was estimated at \$85,090,523, apportioned as follows: Raw sugar, 952,187 short tons, valued at \$57,045,523; canned pineapple and juice, \$27,000,000; coffee, 9,500,000 lb., valued at \$1,045,000. The pineapple pack in 1935 was 10,000,000 cases of fruit and 2,500,000 cases of juice. Production of canned tuna fish was 131,000 cases, valued at \$622,250. Hides, bananas, and wool also are exported. The tourist trade, always an important source of income, increased notably during 1934, the number of tourist arrivals being 16,161, compared with 10,111 for 1933. Deposits in the Territory's six banks totaled \$80,497,015 on Dec. 31, 1934, against \$70,414,487 on Dec. 31, 1933. Savings accounts increased to \$48,298,291 from \$43,399,283 a year earlier.

In 1935 raw sugar production totaled 986,075 short tons, valued at \$63,739,000. The pineapple crop was valued at \$35,625,000; coffee, about \$750,000.

Overseas Trade. Imports in the calendar year 1934 were valued at \$69,234,606 (\$63,127,987 in 1933) and exports at \$95,830,059 (\$94,317,696 in 1933). Imports from the United States were \$63,472,682 (\$57,894,488 in 1933) and exports to the

United States totaled \$94,513,699 (\$93,641,887 in 1933). The chief exports to the United States in 1934 were: Raw sugar, \$53,423,919; canned pineapples, \$34,156,106; United States goods returned, \$2,575,140; molasses, \$1,436,190; coffee, \$642,962; fish, \$542,853.

In 1935 imports from the United States were \$78,924,776; exports to the United States, \$98,695,969.

Finance. The consolidated statement of Territorial budget operations for the fiscal year ended June 30, 1935, showed total revenue receipts of \$13,128,781 and non-revenue receipts of \$10,895,723, while total payments for government costs were \$11,714,842 and for non-governmental costs \$11,251,750. Total receipts were \$24,024,504 and total payments \$22,966,591. The total bonded debt outstanding on June 30, 1935, was \$31,715,000 (\$32,012,000 on June 30, 1934).

Communications. A new era in Hawaiian communications was opened with the inauguration on Nov. 22, 1935, of airmail service from Alameda, Calif., to Manila, via Hawaii, Midway and Wake Islands, and Guam. The swift Pan American Clipper planes brought Honolulu within 18 hours of the mainland. They were to open a passenger service also early in 1936. Planes of the inter-island air service flew 292,109 miles during the year ended June 30, 1935, carrying 11,898 passengers. Railways extended about 1038 miles, including 667 miles of plantation lines. There were 50,070 privately owned motor vehicles in 1935, an excellent highway system, 23,438 telephones with 89,229 miles of wire, and radiotelephone service to the United States. A total of 1211 overseas vessels of 10,402,112 gross tons entered Hawaiian ports during 1934-35.

Government. The Governor and the Secretary of the Territory are appointed for four years by the President of the United States. There is a bicameral legislature, consisting of the Senate of 15 members elected for four years and the House of Representatives of 30 members elected for two years. A delegate, elected biennially, represents the Territory in the United States Congress. Governor in 1935, J. B. Poindexter, who assumed office Mar. 1, 1934. Delegate to Congress, Samuel Wilder King (Republican), elected in November, 1934.

History. Following a formal petition for Statehood submitted to Congress in May, 1935, a committee composed of five members of the U.S. House of Representatives conducted hearings on the question in Hawaii for two weeks during October. Representatives of both the Republican and Democratic parties in Hawaii testified that sentiment there overwhelmingly favored State's rights. Testimony before the committee indicated that the islanders' desire for Statehood had been strengthened by proposals in Congress for the establishment of a commission government for Hawaii and for restriction of the governorship to residents of the mainland. The quota system restricting exports of Hawaiian sugar to the United States and the desire of the islanders to restrict immigration of cheap labor from the Philippines were advanced as additional reasons why Hawaii desired full Statehood immediately. The loyalty to American institutions of the Japanese-American citizens of Hawaii was another problem in which the committee displayed deep interest. Out of 291,645 citizens on June 30, 1935, 108,355 were of Japanese descent, and the high birth rate among them aroused fears that they would eventually attain a voting majority. The recommendations of the committee were to be submitted to Congress in 1936.

Governor Poindexter in his message of Feb. 20, 1935, to the Legislature urged that a memorial for a unicameral legislature be addressed to Congress. He asked territorial legislation tightening restrictions on the sale of liquor, and an amendment of the electoral law which would permit names of candidates to appear on the ballot without political designation. Legislation passed before adjournment on May 1 included a new general (gross income) excise tax law, a bank excise tax law, consumption tax law, and personal property tax law. Other measures enabling the Territory to take advantage of Federal legislation were adopted, as well as joint resolutions asking legislation by Congress authorizing the Territory to issue bonds for public works.

The Territory shared in the emergency relief and recovery measures of the Federal Government. The FERA contributed \$2,358,000 during 1934-35 for unemployment relief, the Territory contributing \$496,557. Projects undertaken with these funds included work on highways, bridges, parks, flood control, school grounds, playgrounds, public health facilities, etc. Up to the end of September, 1935, the sugar industry had received about \$11,500,000 in benefit payments from the sugar processing taxes of the AAA. Ten per cent of these funds, earmarked for the development of agricultural enterprises other than sugar, were devoted to various projects such as the eradication of rats, development of truck farming, improvement of farm marketing facilities, development of tropical fruits and nuts and promotion of the poultry industry. A total of 115,134 man-days of work was done by the Emergency Conservation Work. The Federal Housing Administration and Home Owners' Loan Corporation carried on active campaigns. Before the Supreme Court decision of May 27, 1935, voiding the NRA, application of codes of fair competition to retail trades in Hawaii increased payrolls by \$13,000 a week and provided work for 700 additional persons, according to sworn statements of about half the retailers. Governor Poindexter reported that competent estimates of the total payroll and employment increases ran much higher.

Partly as a result of such emergency expenditures, the increased demand and higher prices for Hawaiian exports, and the larger tourist trade, the islands witnessed a marked economic recovery during 1935. The industrial struggles which disrupted shipping activity on the Pacific coast during 1934 spread to Hawaii in 1935 when the radical International Longshoremen's Union attempted to organize the Hawaiian, Japanese, and Portuguese stevedores at Honolulu. The industrial, financial, mercantile, and shipping interests formed the Industrial Association of Hawaii to combat the union. For the inauguration of air mail service to the mainland, see *Communications*.

Following a sharp earthquake, accompanied by a tidal wave, the 14,000-foot volcano of Mauna Loa on the island of Hawaii began to erupt on November 21. Rivers of molten lava poured down the mountain in several directions. By December 26 one stream 600 feet wide had followed the course of the eruption of 1855 to within 30 miles of Hilo, menacing the city's water supply. On December 27 army aviators dropped 6000 pounds of bombs at the source of the lava stream in an effort to divert its flow. A few days later a slackening of the flow was reported.

HAY. The 1935 hay crop of the United States was estimated by the Department of Agriculture at 87,620,000 tons and the acreage at 64,488,000 acres, the smallest but one in 17 years. This crop, next to

the largest in 10 years, was 9 per cent above the average for the 5 years 1928-32 and 54 per cent above the small crop of 57,028,000 tons in 1934. The yield of all tame hay per acre, 1.45 tons, was with two exceptions the highest in 69 years of record. The yield of all tame hay including clover and timothy, alfalfa (which see), grain, annual legume (soy beans, cowpeas, and peanut vines), sweet clover, and lespedeza hay amounted to 75,619,000 tons and was produced on 52,026,000 acres. The production of the leading states was reported as follows: New York 5,475,000 tons, Iowa 5,292,000 tons, Wisconsin 5,182,000 tons, and California 4,259,000 tons. The 1935 wild hay production was placed at 12,001,000 tons, Nebraska ranking first with an estimated yield of 2,475,000 tons followed by Minnesota with 1,957,000 tons and North Dakota with 1,454,000 tons.

The crop of all clover and timothy hay, not including sweet clover and lespedeza or Japan clover hay, was estimated as 26,611,000 tons and the acreage as 20,378,000 acres. Of the eight States producing over a million tons New York reported a yield of 3,030,000 tons, Pennsylvania of 2,158,000 tons, Ohio of 1,776,000 tons, and Iowa of 1,500,000 tons. For grains cut green for hay a yield of 5,009,000 tons on 4,354,000 acres was reported. In the production of this class of hay California stood first with 1,253,000 tons followed by North Dakota with 655,000 tons, Oregon with 587,000 tons, and Washington with 476,000 tons. The yield of miscellaneous tame hay, comprising hay from Sudan, Bermuda, Johnson and orchard grasses, red top, millet, vetch, mixed cowpeas and sorghum, and old meadows, was estimated at 7,194,000 tons, of annual legume hay at 5,862,000 tons, lespedeza hay at 1,214,000 tons, and sweet clover hay at 663,000 tons. For the fiscal year 1934-35 exports of 3000 long tons and imports of 49,000 short tons of hay are recorded.

HEART, DEVELOPMENT OF NEW BLOOD SUPPLY BY OPERATION. See MEDICINE AND SURGERY.

HEIMWEHR. See AUSTRIA.

HEJAZ. See ARABIA under *Saudi Arabia, Kingdom of*.

HELICOPTERS. See AERONAUTICS.

HENDERSON, Rt. Hon. ARTHUR. A British Labor leader and peace advocate, died in London, Oct. 20, 1935. He was born in Glasgow, Sept. 15, 1863, but his family eventually moved to Newcastle, England, and he obtained work as an iron-molder's apprentice in Robert Stephenson & Co.'s works. The trades union movement soon interested him and he became an active leader. For a time he served on the Newcastle City Council and Darlington Borough Council, and in 1903 became Mayor of Darlington. Subsequently he was a magistrate of Durham County.

In 1903, Henderson, who had been loosely connected with the Liberal Party, decided to cast his lot in with the Labor movement, and was the successful candidate for Barnard Castle division of Durham in a three-cornered contest for Parliament. He soon won the respect of his few Labor colleagues, and the next year was made treasurer of the Party. In 1908 he was elected chairman of the Parliamentary Labor Party, holding the office until 1910, and being reelected from 1914 to 1917. He was secretary from 1911 to 1914, and for part of that year was chief whip of that Party. He held this position also from 1921 to 1924, and again from 1925 to 1927. He was reelected by the Barnard Castle Division until 1918, and after that was defeated in several general elections, although returned at subsequent by-elections.

The World War almost caused the disruption of the Labor Party, for Ramsay MacDonald, and a few other members, refused to condone British participation in the War, whereas Henderson resolutely favored it and was able to swing the majority of the Party into line. With the formation of the first Coalition Ministry by Herbert Asquith in 1915, Henderson was made President of the Board of Trade and Paymaster-General, his chief function being to advise the Cabinet in regard to labor affairs. At the downfall of this ministry and the formation of Lloyd George's, he became a minister without portfolio, and was successful in throwing the support of labor behind the Compulsory Service Act, which was then bitterly opposed by many labor organizations. In 1917 he was sent to Russia to survey the results of the Kerensky revolution. The Kerensky provisional government was sponsoring an International Labor and Socialist Conference at Stockholm at that time and Henderson came to the conclusion that British labor should be represented. Upon his return he tried to interest organized labor but met with little success and his plans for participation did not materialize. He resigned from the cabinet because of Lloyd George's refusal to approve participation in the Conference, and in subsequent elections met with defeat.

In the first Labor ministry, formed as a result of the 1923 election, Henderson became Home Secretary in MacDonald's cabinet. Several important measures, including an amendment to the factory acts, emanated from his office, and he played a notable part in helping to frame the Geneva protocol for the settlement of internal disputes by arbitration and conciliation. In the 1929 Labor ministry he was appointed secretary for Foreign Affairs amid much criticism, but soon he was considered a worthy successor to the great names that had preceded him. During his administration diplomatic relations were resumed with Soviet Russia, and he shared with Philip Snowden, the laurels won by the British at the Hague Conference on the Young Plan. In August, 1931, the Labor ministry was defeated and MacDonald joined the National Government (Coalition) as Prime Minister, which drew upon him the enmity of the Laborites. Henderson was chosen leader of the Labor Party, but his political fortunes were low and he tried unsuccessfully to be elected to Parliament. He resigned as leader of the Labor Party in the House of Commons in October, 1932, but did retain the office of secretary-treasurer. In September, 1933, he was returned to Parliament in the by-election from Clay Cross Division of Yorkshire.

For many years, Mr. Henderson had been an able and ardent advocate of the cause of peace, and during his tenure as Foreign Secretary endeavored to effect friendly relations with Europe, not always with success. In 1932 he was appointed by the League of Nations chairman of the International Disarmament Conference and his work at Geneva won high praise. In April of 1933 he was awarded the Wateler Peace Prize of the Carnegie Foundation, for "the energy, persistence, ability, and impartiality with which Mr. Henderson has presided over the Disarmament Conference." The Nobel Peace Prize was awarded to him in December, 1934, for his work at the Conference, and in accepting the honor, he said, in part: "You can not use the word failure in reference to the Conference. There is no greater human issue upon which hope concentrates than the cause of disarmament. There is no greater achievement to be realized than that of securing the world's peace. There is no greater

action in the world than that of leading the people to peace, freedom, and security."

HEREDITY. See ZOOLOGY.

HESSE. See GERMANY.

HIERARCHY, THE. See ROMAN CATHOLIC CHURCH.

HISPANIC SOCIETY OF AMERICA, THE. An international organization founded in New York City in 1904 to establish a public library and museum designed to be a link between the English-, Spanish-, and Portuguese-speaking peoples, and to advance the study of the Spanish and Portuguese languages, literature, and history, and the study of the countries wherein Spanish and Portuguese are or have been spoken languages. Since 1904, when a collection of paintings, manuscripts, maps, and coins and a library of about 40,000 volumes were placed in charge of the society, valuable additions have been made to this collection, and a number of temporary exhibitions have been held of the works of noted Hispanic artists. Membership of the society is limited to 100, is honorary, and includes specialists and scholars of all nationalities distinguished in the Hispanic field. President, Archer M. Huntington. Headquarters: 156th St., West of Broadway, New York City.

HISPANIOLA. Official name of the island commonly known as Haiti. See HAITI; DOMINICAN REPUBLIC.

HISTORICAL ASSOCIATION, AMERICAN. A society for the promotion of historical studies and writings, formed in 1884 by a group of scholars and chartered by Congress in 1889. Its membership in 1935 numbered approximately 2991.

The association's 50th annual meeting was held in Chattanooga, Tenn., Dec. 27-30, 1935. Meeting concurrently were the Mississippi Valley Historical Association, Conference of State and Local Historical Societies, Agricultural History Society, American Society of Church History, Medieval Academy of America, and National Council for the Social Studies.

Several round table discussions were held by the association, together with the American Political Science Association, one of the most interesting being that on "Civil Liberties," in which Secretary of the Interior Harold Ickes, Roger Baldwin of the American Civil Liberties Union, and Hamilton Fish of New York participated. The John H. Dunning Prize for 1935 was awarded to Miss Angie Debo for her book, *The Rise and Fall of the Choctaw Republic*.

The official organ of the Association is the *American Historical Review*, a quarterly. The officers for 1935 were: President, Michael Rostovtzeff, Yale University; first vice-president, Charles H. McIlwain, Harvard University; second vice-president, Guy Stanton Ford, University of Minnesota; secretary, Dexter Perkins, University of Rochester; treasurer, Constantine E. McGuire, Washington, D. C.; executive secretary, Conyers Read, Philadelphia, Pa.; and assistant secretary-treasurer, Patty W. Washington. Headquarters are at 40 B Street, S.W., Washington, D. C.

HISTORY. See FRENCH LITERATURE; GERMAN LITERATURE; LITERATURE, ENGLISH AND AMERICAN; PHILOLOGY, MODERN, ETC.; also sections on *History* under each country.

HITCHCOCK, FRANK HARRIS. An American editor and cabinet member, died at Tucson, Ariz., Aug. 5, 1935. Born in Amherst, O., Oct. 5, 1869, he attended Harvard University, receiving his degree in 1891, and later studied law at Columbian,

now George Washington, University in Washington, being admitted to the bar in 1894. Following his graduation he obtained a minor post in the Department of Agriculture and served so well that he was brought to the attention of his superiors, eventually becoming Chief Clerk of the Division of Foreign Markets of the Department of Agriculture in 1897. George B. Cortelyou, secretary of Commerce and Labor in President Roosevelt's cabinet, became interested in him and had him removed to his department in 1903 as chief clerk during which time he also had charge of the Alaskan fur seal service and prepared "Hitchcock's regulations" which not only safeguarded the interests of the United States, but put the care of the seals themselves on an intelligent basis. When Mr. Cortelyou was appointed chairman of the Republican National Committee in 1904, Hitchcock joined him as assistant secretary, and a year later when Cortelyou was made postmaster-general in Roosevelt's cabinet, Hitchcock became first assistant. He served as a member of the Government Exposition Board, 1903-04, and as a member of the Keep commission of 1905-06 to investigate waste in government departments.

In the 1908 campaign for the presidency, President Roosevelt suggested Mr. Hitchcock to William H. Taft as a pre-convention manager and he succeeded so ably in this position that Taft offered him the job of managing the Republican National campaign. With the election of Mr. Taft to the presidency, Hitchcock became postmaster-general, Mar. 5, 1909, and retained the position of chairman of the Republican National Committee. During his tenure, which lasted until Mar. 4, 1913, a surplus of revenues over expenditures resulted in the Department, the present parcel post system was organized, going into effect Jan. 1, 1913, as well as that of postal savings banks. His administration is credited with beginning the first air mail service and he himself known as the "Father of the United States Air Mail," for in 1911 an experimental aerial air service was first authorized and at the aviation meet at the Nassau Boulevard Aerodrome on Long Island, in September, an aerial post box was maintained and the mail was carried to Mineola in an aeroplane and there given to the postmaster. On one occasion the postmaster general was a passenger and personally carried the mail sack.

He made his home in Arizona from about 1907, and held a half interest in *The Daily Citizen* of Tucson, and after the death of his partner managed it himself. Subsequently he bought *The Las Vegas* (New Mexico) *Optic*. He built up a strong Republican organization in the State and was instrumental in obtaining many benefits for it, including the placing of Tucson and Phoenix on the Transcontinental Airways and Federal funds with which to build the mountain road from Tucson to Mount Lemmon.

Always interested in aviation, he was a Lieutenant-Colonel in the Officers' Reserve Corps of the Army Air Corps, and governor for Arizona of the National Aeronautic Association.

HOBART COLLEGE. An institution for the higher education of men in Geneva, N. Y., founded chiefly under the auspices of the Protestant Episcopal Church in 1822. William Smith College, a coordinate institution for the separate instruction of women, was established in 1908. The student enrollment in Hobart College for the autumn of 1935 was 300, while the enrollment in William Smith College was 120. The combined faculty of the two

colleges numbered 43. The library contained approximately 100,000 volumes and 25,000 unbound pamphlets. The endowment amounted to \$1,200,000, and the income for the year was approximately \$350,000, including gifts of \$20,000. President Murray Bartlett, D.D., S.T.D., LL.D., was to retire May 31, 1936, after 17 years of service. William Alfred Eddy, Ph.D., Professor of English in Dartmouth College, was appointed to succeed him.

HOCKEY. The Montreal Maroons brought the Stanley Cup, emblematic of world's professional hockey supremacy, back to Canada in 1935. Guided by Tommy Gorman, manager who in 1934 had piloted the Chicago Black Hawks to the same high estate, the Maroons contributed one of the great surprises of hockey in turning back the heavily favored Toronto Maple Leafs in three straight games to capture the title. Toronto won the National Hockey League championship, beating the Boston Bruins in the post-season playoffs between the winners of the American and International groups. To reach the round with the Maple Leafs, the second place winners in the International division had to beat the Chicago Black Hawks and then eliminate the New York Rangers, winners in the third place playoff.

The Boston Cubs won the Canadian-American League race and also were victorious in the playoff series, defeating Providence in three successive games. The Detroit Olympics won the International League playoffs from the London Tecumsehs. To a Canadian team also went the honor of taking the world's amateur championship, the Winnipeg Monarchs sweeping through the international tournament at Davos, Switzerland, winning seven straight games. The Halifax Wolverines defeated the Montreal Royals for the Allan Cup, emblematic of the amateur superiority of Canada. The Baby Ruth team of Chicago, winner of the Western A.A.U. championship, turned back the Boston Olympics, Eastern winner, for the National A.A.U. title. Canadians were ineligible in this tournament for the first time. Yale captured the Quadrangular League crown and the University of Michigan was best in the Western Conference. The Vancouver Lions topped the Northwestern League and St. Paul won in the Central League.

HOGS. See LIVESTOCK.

HOLLINS COLLEGE. A liberal arts college for women, founded in 1842, located 6 miles north of Roanoke, Virginia. It is nonstate, nonsectarian, with an endowment of \$405,300. The 1935 enrollment is 310. The faculty numbers 44. There are 22 buildings on a campus which includes more than 400 acres. The physical equipment was valued in 1932 at \$1,323,639. President, Bessie C. Randolph, Ph.D.

HOLMES, OLIVER WENDELL. An American jurist, died in Washington, D. C., Mar. 6, 1935. He was born in Boston, Mass., Mar. 8, 1841, the son of Dr. Oliver Wendell Holmes, the poet and essayist, and entered Harvard University in 1857. In April of 1861 the Civil War began and young Holmes volunteered, receiving his degree in June. He served with the 20th Massachusetts Volunteers, later known as the "Harvard Regiment," for three years, being thrice wounded: first, in the chest at Ball's Bluff on Oct. 21, 1861; second, in the neck, at Antietam, Sept. 17, 1862, and third, in the heel at Marye's Hill, Fredericksburg, May 31, 1863. Later he was assigned to the staff of Gen. Horatio G. Wright and was mustered out of the service on July 16, 1864, with the rank of captain.

After considerable thought as to the career he

should follow, he turned to the law and was graduated from the Harvard Law School in 1866, being admitted to the bar in the following year. In 1870 he became instructor in constitutional law at Harvard and in the same year took over the editorship of *The American Law Review*. For three years he edited the *Review*, giving it up in 1873, the same year that he issued his edition of Kent's *Commentaries*. In 1880 he delivered a series of lectures on common law at Lowell Institute, and two years later issued them in book form under the title, *The Common Law*, a book which the London *Spectator* considered the most original work on legal speculation that had appeared since the publication of Sir Henry Maine's *Ancient Law*. The excellence of this work caused the Harvard Law School to offer him the professorship of law, which he accepted in 1882, although a short time later Governor Long of Massachusetts appointed him to the Supreme Court of the State as associate justice, and he became chief justice on Aug. 2, 1899.

While serving on the Massachusetts bench, Justice Holmes issued many decisions that were considered as establishing precedents, especially those that dealt with the status of labor organizations and the legality of picketing. He declared that workmen had a right to combine, and "to support their interests by arguments, persuasion, and the bestowal or refusal of those advantages which they otherwise lawfully control, so long as they do no violence or threaten no violence."

In 1902 President Roosevelt, attracted by Justice Holmes's labor decisions, appointed him to succeed Justice Gray of Massachusetts in the United States Supreme Court, where his profound legal learning, his sound judgment, and humor, and his gifts of literary expression gave him a position of great influence. The first case with which he was concerned was that of the Northern Securities, in which the dissolution of the Northern Securities Company was sought by the Government on the ground that it was a violation of the Sherman Act. The case was won by the United States, 5 to 4, but Justice Holmes, in writing the minority opinion, gave expression to views that were not to become established until almost 20 years had passed. He argued against the assumption that "when a combination reached a certain size it might have attributed to it more of the character of a monopoly merely by virtue of its size than would be attributed to a smaller one." In 1920, when the Railway Act was passed, time had caught up with his thought, for where in the Northern Securities case a comparatively small combination was declared illegal, the Railway Act consolidated many disjointed railroad systems into a few systems, each of them far greater than the one formed by Morgan and Hill.

As Justice Holmes objected to the use of the clause limiting States' rights many of his opinions hinged on the "due process" language of the Fourteenth Amendment. He said, "There is nothing I more deprecate than the use of the Fourteenth Amendment beyond the absolute compulsion of its words to prevent the making of social experiments that an important part of the community desires." The importance of the issues involved, and the arresting quality of the language used, led to the belief that the Justice was generally a dissenter. This however was false, for he concurred with the majority opinion about 10 times more often than he dissented, and seldom dissented alone.

In 1925 he delivered the opinion in the Chicago water case, whereby the city of Chicago was to lessen by half the amount of water it diverted from

Lake Michigan. During the year 1927, he delivered many notable decisions, including the condemnation of the color line in the Texas primary law; the establishment of the fact that bootleggers were subject to income taxes; the upholding of free speech and assembly in what seemed to be extreme cases. In May, 1929, he dissented from the opinion that Rosika Schwimmer should be denied citizenship as she refused to bear arms, saying, in part, "Some of her answers might excite popular prejudice, but if there is any principle of the Constitution that more imperatively calls for attachment than any other, it is the principle of free thought—not free thought for those who agree with us, but freedom for the thought we hate." On Jan. 12, 1932, Justice Holmes retired from the United States Supreme Court at the age of 91, after having served 30 years as a great liberal judge.

Besides *The Common Law*, he published also *Speeches* (1891, 1913); *Collected Legal Papers* (1920), and contributed to *Selected Essays on the Law of Torts* (1924). In 1929 appeared *Dissenting Opinions of Mr. Justice Holmes*, arranged by Alfred Lief, and two years later, *Representative Opinions of Mr. Justice Holmes*, arranged by the same.

HOLY CROSS, COLLEGE OF THE. A Roman Catholic college for men, under the Society of Jesus, in Worcester, Mass., founded in 1843. The enrollment for the autumn of 1935 totaled 1189. The faculty numbered 87. The library contained 115,000 volumes. President, the Rev. Francis J. Dolan, S.J.

HOLY YEAR. See ROMAN CATHOLIC CHURCH.

HOMEBUILDING, FEDERAL. See UNITED STATES under *Administration*.

HOME OWNERS LOAN CORPORATION. See INSURANCE.

HONDURAS, hōn-dōō'rās. A Central American republic. Capital, Tegucigalpa.

Area and Population. Honduras has an area of about 44,275 square miles; the population on Nov. 30, 1934, was 962,685 (854,184 at the 1930 census). The people are mainly of mixed Spanish and Indian blood, but there is a considerable Negro population in the north coast banana region, and some 35,000 aborigines. Populations of the chief towns in 1930 were: Tegucigalpa, 47,075; San Pedro Sula, 24,425; La Ceiba, 13,073; Comayagua, 12,703; Choluteca, 12,248. Primary education is nominally free, compulsory, and secular, but in 1933 only 41,689 out of 103,463 children of school age were receiving instruction. About 69 per cent of those over seven years of age were illiterate. In addition there were 814 pupils in 15 secondary schools, 1405 in normal schools, and 372 in commercial high schools. The National University at the capital had 308 students in 1933.

Production. Stock raising and agriculture are the principal occupations. About 30 per cent of the population is dependent upon the banana industry, controlled by the United Fruit and other foreign companies. Coffee, tobacco, and coconuts are the other chief products. Sugar production was discontinued in 1934. Banana exports in 1933-34 totaled 19,462,596 stems (23,493,676 stems in 1932-33). Coffee exports in 1933-34 amounted to about 3,306,900 lb. Coconut exports (1932-33) totaled 5,665,000 nuts, valued at \$53,000. Mahogany and other hardwoods and gold and silver are produced. The chief manufactures are straw hats and cigars.

Foreign Trade. For the fiscal year ended July 31, 1934, imports were valued at \$8,382,084 in U.S. currency (\$6,287,563 in 1932-33). Exports totaled

24,799,259 lempiras (28,554,397 lempiras in 1932-33). The lempira, equal to \$0.50 at par, exchanged at an average of \$0.4878 in 1933 and \$0.49 in 1934. The United States furnished 70 per cent of the 1933-34 imports (73 per cent in 1932-33) and purchased 71.7 per cent of the total exports (67 per cent in 1932-33). The value of the chief exports in 1932-33 was: Bananas, \$11,747,000; coffee, \$304,000; leaf tobacco, \$84,000.

United States figures showed general imports from Honduras in 1935 of \$6,337,225 (\$7,790,924 in 1934) and exports to Honduras of \$5,633,026 (\$5,993,332 in 1934).

Finance. The national budget estimates for the fiscal year ended July 31, 1936, balanced at 11,741,000 lempiras. Actual budget returns for 1933-34 showed receipts of 11,156,000 lempiras and expenditures of 13,038,000 lempiras; for 1934-35 budget estimates balanced at 10,283,000 lempiras.

The public debt on July 31, 1934, amounted to 28,661,422 lempiras (\$14,044,096), of which 21,042,703 lempiras (\$10,310,924) represented the internal and 7,618,719 lempiras (\$3,733,172) the external debt.

Communications. Pack mules and ox carts, long the accustomed means of transportation, are being supplanted by the railways, automobiles, and aeroplanes. In 1934 there were 893 miles of railway lines, about 375 miles of motor highways, 76 landing fields, and air lines linking the capital with many points in the republic as well as with the inter-American air network. In 1935 the Honduran air system averaged 42 flights per week, and more than 80,000 air miles per month, carrying about 1200 passengers and 200,000 lb. of freight.

Government. The Constitution of 1924 vests executive power in a President and legislative power in a Congress of Deputies (59 members in 1935), both elected by popular suffrage for four years. Congress meets annually during January and February. When it is not in session, a Permanent Commission of five members transacts routine and emergency business. President in 1935, Gen. Tiburcio Carias Andino (Nationalist), who assumed office Feb. 1, 1933.

History. As in previous years, the strict censorship in Honduras prevented accurate news of internal political developments from reaching the outside world. Reports of unrest were circulated from Nicaragua and other neighboring states, however, and the provisions of a rural settlement decree signed by President Carias on Mar. 8, 1935, were obviously designed to counteract communistic propaganda among the landless and peon classes. The decree provided for the distribution of lands in tracts of 50 acres and governmental assistance in supplying settlers with farm implements, seeds, cattle, and other equipment. In addition colonists were authorized to import machinery, seeds, and other requisites free of duty. All applicants for land were obliged to swear that they did not belong to communistic or anarchistic organizations and the government retained the right to deport foreign settlers and confiscate their lands if they engaged in subversive activities.

The January-February session of Congress voted to suspend payment on internal public debts contracted between 1926 and 1934. In his message to Congress, however, President Carias Andino pointed out that Honduras was one of the few Latin American countries which had not declared a moratorium on its foreign debt and that during 1934 increased government revenues had permitted the liquidation of part of the foreign debt. The govern-

ment assumed control of foreign exchange transactions on June 1, 1934, but exchange was readily available during 1935 to pay for all imports at the rate of 2.04 lempiras to the dollar in Tegucigalpa and of 2.03 on the North Coast.

Although President Carias Andino's term of office did not expire until Feb. 1, 1937, his announced determination to secure reelection for another term aroused such strong opposition among members of his own Nationalist party as well as among the opposition Liberals that the country late in 1935 was reported on the verge of revolution. Commencing in October a number of prominent political figures were deported from the country when they joined the opposition to the President. The candidate of the anti-Carias faction of the Nationalists was Dr. Venancio Callejas, a former President of Congress. In November Dr. Miguel Paz Baraona, Honduran Minister to Washington and a former President of the country, resigned to oppose General Carias's reelection. By a Presidential order of November 26 Dr. Baraona was barred from entering Honduras. Meanwhile all political meetings were prohibited.

In a trade agreement signed with the United States Dec. 18, 1935, Honduras conceded substantial duty reductions on smoked and canned meat products, condensed, evaporated and dried milk, canned and dried fruits, cotton shirts, and certain soaps, medicines, and drugs. The United States agreed to keep such Honduran products as bananas, coffee, and cacao on its free list and to reduce the existing tariff on balsams, pineapples, mango and guava pastes and pulps, and prepared or preserved guavas.

A hurricane followed by heavy rainfall caused the greatest flood on record in Northern Honduras late in October. More than 100 persons were reported to have perished and property damage ran into the millions of dollars.

HONDURAS, BRITISH. See **BRITISH HONDURAS.**

HONG KONG. A British crown colony in South China comprising the island of Hong Kong (32 sq. m.), Old Kowloon (3 sq. m.), and the New Territories (356 sq. m.). Total area, 391 sq. miles; total population (1934 estimate), 944,492 of whom 923,654 were Chinese. During 1934, there were 20,886 births and 19,766 deaths.

Education. In 1934, there were 1071 schools (155 English and 916 vernacular) for primary, secondary, and vocational education. The total enrollment was 73,348. Hong Kong University, with faculties of arts, medicine, and engineering had 366 students (mostly Chinese) in 1933.

Production. The principal manufactures were cement, refined sugar, preserved ginger (HK\$1,665,406 exported), knitted goods (singlets, HK\$3,011,096 and hosiery, HK\$677,873, exported), flashlight torches and batteries (HK\$2,933,349 exported), rubber shoes (HK\$3,000,000 exported), lard, ropes, and ships. Sea fishing is an important industry. Agriculture is carried on in a limited way.

Trade. For the year 1934, the value of imports (exclusive of treasure of HK\$78,080,869) amounted to HK\$415,918,522; exports (exclusive of treasure, HK\$128,479,428) totaled HK\$325,104,653 (HK\$ averaged \$0.3872 for 1934). China sent 35.2 per cent of the imports and received 48 per cent of the exports. Hong Kong is the chief port for South China and is noted for its transit trade with the rest of the world, as well as Central and North China. The harbor is fortified and is the headquarters of the China Squadron of the British Navy,

Ships entered and cleared during 1934 totaled 93,754 and aggregated 1,129,359 tons.

Government. For 1934, revenue totaled HK\$29,574,286; expenditure, HK\$31,149,156; total public debt on Jan. 1, 1935, amounted to HK\$18,838,000. Administration is by a governor assisted by an executive council of 9 members (6 official, 3 unofficial) and a legislative council of 17 members (9 official, 8 unofficial). Sir Andrew Caldecott was appointed during 1935 to succeed Sir William Peel as Governor and Commander-in-Chief.

On Dec. 5, 1935, the Legislative Council enacted an ordinance providing for surrender to the government of all silver in excess of 10 Hong Kong dollars in exchange for government certificates at the rate of 128 cents (Hong Kong) per fine ounce of bullion. At the same time an exchange stabilization fund was established to protect Hong Kong currency against changes in the currency system in China (q.v.).

HOPPER (WILLIAM) DE WOLF. An American actor, died in Kansas City, Mo., Sept. 23, 1935. Born in New York City, Mar. 30, 1858, he was destined for a legal career but feeling that the stage offered a more glamorous life, he invested his patrimony in the Criterion Comedy Company and made his professional debut as Talbot Champneys in *Our Boys* at New Haven, Conn., Nov. 4, 1878. For two years the Criterion Company existed, and shortly after its disbandment, he organized the Gosche-Hopper Company, the star of which was Georgie Drew Barrymore. The first play produced was *One Hundred Wives*. This company lasted for two seasons, and Hopper, his money gone, was compelled to look for work.

He obtained a part with Edward Harrigan in *The Blackbird*, and in 1884 was on the road with one of the companies playing *Hazel Kirke*. In the autumn of 1885 he was with the McCaull Opera Company, and he began his success in rôles that have since become classics. For five years he was principal comedian with this company, appearing in *The Black Hussar*, *Don Cesar*, *Boccaccio*, *Die Fledermaus*, etc. On May 5, 1890, he appeared in *Castles in the Air*, billed as a headliner. The next year he appeared in what was to be one of his most famous rôles, that of the Regent of Siam in *Wang*. For two seasons he played this part, with Della Fox as his leading woman. He followed it with *The Panjandrum* (1893), *Dr. Syntax* (1894), and in 1896, the Sousa opera, *The Charlatan*, in which he made his London debut in 1899. He appeared also in *El Capitan* in London in this year, having played the part in New York the previous year.

He was associated with the Weber & Fields Company for the next two years and then resumed his starring tours, presenting *Mr. Pickwick*, a revival of *Wang*, *Happyland*, and *A Matinée Idol*, which he opened in New York, Apr. 28, 1910. Two years previous he appeared in the title rôle of *The Pied Piper*. In 1911 he entered a phase of his career that was to bring him new laurels, for he brought to the New York stage a series of the operettas of Gilbert and Sullivan, first producing *H.M.S. Pinafore* on May 29. He followed this with the rôles of Bunthorne in *Patience*, the sergeant of police in *The Pirates of Pensance*, Ko-Ko in *The Mikado*, and the Lord Chancellor in *Iolanthe*. It was, however, in one of the lesser-known rôles that he gave one of his most memorable performances—that of Jack Point in *The Yeoman of the Guard*. He played in *The Passing Show of*

1917 and toured in this, 1917-18, and in 1918 appeared in *Everything*.

In straight comedy parts, he played Falstaff in *The Merry Wives of Windsor*, and David in an all-star revival of *The Rivals*, with Joseph Jefferson. During the season of 1918-19, he played the rôle of Old Bill in *The Better 'Ole*, and in 1921 appeared as Ravennes in a revival of *Erminie*. Thereafter he went on tour in *El Capitan* and *The Chocolate Soldier*, and *The Student Prince*, 1925-28. In 1928 he appeared on the New York stage in *White Lilacs*, and subsequently in several unsuccessful plays. In the early days of the motion picture industry he had tried this new medium but was unsuccessful, and at the time of his death was appearing on the radio.

For all his success as an actor, Mr. Hopper was perhaps best known, at least to a later generation, for his excellent rendition of *Casey at the Bat*, which he first gave at a benefit concert run by Col. McCaull on May 13, 1888. Archibald C. Gunter, a playwright of the time, suggested that this piece, written by Ernest L. Thayer, and which he had clipped from a San Francisco newspaper, would be appropriate for the baseball benefit, and it was given to Hopper to recite. The demand for the recitation of these verses never waned, and as late as 1932 he recited the lines over the radio.

Mr. Hopper was known also for his many marital experiences, for he was married six times, his wives having been Ella Gardiner, Ida Mosher, Edna Wallace, Nellie Bergon, Ella Furry, and Lillian Glaser. He served as shepherd of the Lambs Club from 1900-02, and in 1927, wrote, with W. W. Stout, an account of his life, entitled *Once a Clown, Always a Clown*.

HOPS. Data submitted to the International Institute of Agriculture placed the 1935 hop production of England and Wales at 27,810,000 lb., of Czechoslovakia at 15,432,000 lb., and of Belgium at 3,748,000 lb. The 1935 European crop was reported as generally of good quality and of satisfactory yield. For 1934 Germany reported a production of 14,427,000 lb. and Poland of 3,172,000 lb. International data on hop production are seldom closely up to date and hence are frequently incomplete. The world's production during recent years has ranged from about 84,000,000 to 106,000,000 lb. Ten European countries not including the Soviet Republics in 1933 produced 56,842,000 lb. at an average yield of 794 lb. per acre. The combined production of Australia and New Zealand in the crop-year 1933-34 was reported at 1,654,000 lb. Canada which produces its crop mainly in British Columbia reported a yield of 1,477,000 lb. in 1933.

Estimates by the Department of Agriculture placed the 1935 production of hops in the United States at 47,080,000 lb. and the acreage at 39,200 acres. The total production included 11,513,000 lb. left unpicked because of market conditions, labor shortage, and poor quality. The 1935 production exceeded that of 1934 by 5,885,000 lb. and was approximately 19,000,000 lb. above the average for the five years 1928-32. The acreage and production of 1935 were the largest in the last 19 years. The production by States in 1935 was reported as follows: Oregon 24,700,000 lb., Washington 11,340,000 lb., and California 11,040,000 lb. These yields included unpicked quantities of 5,340,000 lb. in Washington, 5,000,000 lb. in Oregon, and 1,173,000 lb. in California. The average yield per acre for the three States was 1201 lb.

During the fiscal year ended June 30, 1935, the United States exported 6,735,000 lb. of hops. The

world exports in 1933, the latest data available amounted to 36,339,000 lb. Germany, the United Kingdom, the Irish Free State, and Belgium are the principal hop importing countries.

HORMONES. See BIOLOGICAL CHEMISTRY.

HORSE RACING. See RACING.

HORTICULTURE. In line with agriculture in general, horticulture in 1935 showed material improvement in its economical aspects. By regulating shipments and increasing advertising, California disposed of an unusually large citrus crop at reasonable profit to the growers. The freeze in December, 1934, curtailed the prospectively very large citrus crop in Florida. No widespread freezes or droughts marred the 1935 production season in the northern states and the important apple crop was unusually well distributed and the restored confidence and increased buying power in industrial centres helped dispose of fruits, vegetables, and ornamental plants at fairly satisfactory prices.

Horticultural Quarantines. Secretary Henry A. Wallace of the U.S. Department of Agriculture, adopting a liberal policy concerning the movement of nursery stocks, ordered the total abandonment of the domestic narcissus quarantine on Apr. 1, 1935, and of the embargo on foreign grown narcissus bulbs Dec. 15, 1936. The withdrawals were predicated on the belief that the eelworm and bulb flies are now so widely distributed in the United States that these pests cannot be eradicated, thus removing any logical reason for retaining the quarantines.

Miscellaneous Notes. In April, Cornell University received from Dr. Liberty Hyde Bailey, former dean of the college of agriculture, the gift of one of the most extensive herbariums in the country. This collection comprises over 125,000 mounted herbarium sheets, especially rich in cultivated material, and there are also included in the gift 4000 technical books related to horticulture and botany, thousands of photographs, working equipment, etc., the buildings which house the collection, and about 0.25 acre of land. In accepting the gift the university authorized the establishment of an administrative unit in the College of Agriculture to be known as the Liberty Hyde Bailey Hortorium. This will be under the direct supervision of a staff member and with a full-time curator and an advisory board consisting of the supervisor, the curator, representatives of the major fields of plant science, and two members at large. One or more graduate fellowships, to be known as the Liberty Hyde Bailey Botanical Fellowships, will also be established.

Citrus research in Florida received new impetus by a greatly increased support of the Citrus Experiment Station at Lake Alfred. The maintenance funds were enlarged to \$46,451 a year, an increase of over 300 per cent.

The Eleventh International Congress of Horticulture was held in Rome, Italy, September 16-21. Delegates, assembled from all important horticultural regions of the world, presented a large number of papers relating to research, economics, and production practices.

The National Apple Institute, an incorporated association designed to promote the consumption of apples, resulted from a meeting sponsored by the American Pomological Society at Fort Wayne, Indiana, on May 18. Representatives of various fruit growing organizations and societies endorsed a plan of radio and newspaper advertising, hoping thereby to increase the per capita use of apples.

Personnel Changes. Dr. Elmer D. Merrill,

Director of the New York Botanical Gardens and a former director of the California Agricultural Experiment Station, was appointed to the newly created position of Administrator of Botanical Collections of Harvard University. His new duties include direction of the Gray Herbarium, Farlow Herbarium, and Library, Arnold Arboretum, the Harvard Forest, the Bussey Institution, and the Botanical Museum at Cambridge. The vacated position in the New York Botanical Gardens was filled by the appointment of Dr. Marshall A. Howe.

Dr. Leif Verner of the West Virginia University was appointed head of the department of horticulture at the University of Idaho.

Dr. J. H. Beaumont, head of the department of horticulture University of Maryland, resigned in December to accept a corresponding position in the University of Hawaii.

Ornamental horticulturists were gratified with the appointment of Dr. S. L. Emsweller of the University of California to head the U.S. Department of Agriculture's research work in floriculture. Dr. Emsweller had remarkable success in developing disease resistant snapdragons, hollyhock, and other plants for California gardens.

Research Activities. With a total of over 500 research workers in horticulture in the State agricultural experiment stations and in the U.S. Department of Agriculture, there is obviously a substantial output of valuable information each year. This was reflected in a total of 214 papers relating to studies with fruits, flowers, vegetables, and nuts which were presented at the annual meeting of the American Society for Horticultural Science, held in St. Louis, Mo., in late December, 1935. The officers of the society for 1935 were Dr. H. H. Zimmerley, director of the Virginia Truck Experiment Station, president, and Dr. H. B. Tukey of the New York Agricultural Experiment Station at Geneva, secretary. Much of the research work by these horticulturists is necessarily directed toward the solution of urgent problems, such, for example, as the removal of excess spray residues from harvested fruit. Washing in a dilute solution of hydrochloric acid, followed by thorough rinsing in clear water, was found an effective treatment in removing toxic residues.

A conspicuous trend in horticultural research in recent years has been greater attention to floricultural problems, with the result that rust resistant snapdragons, wilt resistant asters, early flowering outdoor chrysanthemums, and reliable cultural information are now available to gardeners.

Domestic Production (United States). Information released by the U.S. Department of Agriculture on Dec. 18, 1935, indicated a 14 per cent increase in total fruit production over the 1934 season and a 5 per cent increase above the 5-year average 1928-32. Apple production was slightly above the average with good distribution among all producing areas. In the eastern fruit growing section, visited by freeze and drought in 1933 and 1934, the increase in apple output over the 1934 crop amounted to 40 per cent. Production of citrus fruits during the 1935-36 season was expected to be 14 per cent less than the large crop of 1934. The value of total vegetables produced in 1935 was estimated at \$223,889,000, an increase of approximately \$30,000,000 above 1934. Yields of vegetables both for market and canning were greater than in any year since 1930. With regard to specific items, total apple production in 1935 was estimated at 168,465,000 bu. as compared with an average of 161,333,000 bu. for the 5 years, 1928-32; peaches

52,380,000 bu. in 1935 compared with 56,451,000 bu. average for the same 5 years; pears 21,255,000 bu. against the 5-year average of 23,146,000 bu.; cherries 117,000 tons in 1935, 108,000 tons for the 5 years; grapes 2,327,000 tons compared with a 2,200,000-ton average; fresh plums and prunes 104,000 tons against 140,000 tons; dried prunes 280,000 tons against 226,000 tons; oranges 55,852,000 boxes as compared with the 5-year average of 48,816,000 boxes; grapefruit 17,988,000 boxes against 14,730,000 boxes; lemons 8,000,000 boxes compared with 7,251,000 boxes; cranberries 486,000 bbl. against 581,000 boxes; pecans 95,340,000 lb. against the average of 59,983,000 lb. and strawberries 11,681,000 crates as compared with 12,127,000 crates.

Data on vegetables show some interesting departures. For market asparagus 4,625,000 crates in 1935 compared with 4,427,000 crates as the 5-year average for 1928-32; market lima beans 602,000 bu. in 1935 against an average of 601,000 bu.; market snap beans 11,824,000 bu. against 9,447,000 bu.; market beets 1,682,000 bu. compared with 1,770,000 bu.; cabbage marketed fresh 790,100 tons in 1935 and a 5-year average of 844,700 tons; cantaloupes 13,322,000 crates against 16,763,000 crates; cauliflower 7,150,000 crates compared with 6,658,000 crates; celery 8,322,000 crates versus 9,168,000 crates; sweet corn for canning 854,600 tons versus 628,000 tons; market cucumbers 4,301,000 bu. versus 4,607,000 bu.; lettuce 19,580,000 crates against 19,163,000 crates; spinach for market 9,839,000 bu. versus 12,580,000 bu.; tomatoes for market 18,903,000 bu. versus 16,891,000 bu.; tomatoes for manufacture 1,673,400 tons against 129,300 tons; early potatoes 38,094,000 bu. versus 42,127,000 bu. and watermelons 57,254 units against a five year average for 1928-32 of 70,053 units.

Foreign Trade. Figures in the September, 1935, number of Monthly Summary of Commerce, published by the Federal Department of Commerce, shows an increase in the values of both exports and imports of horticultural products—including vegetables and preparations, fruit and preparations, nuts, and nursery, and greenhouse stock—for 1935 over 1934. The values of exports of these items was \$104,726,493 in 1935 and \$83,653,178 in 1934. The values of imports during the same periods were \$76,176,578 and \$64,727,131. The much larger increase in imports was rather generally distributed among the various fruits, vegetables, and other items but it is notable that value of banana imports increased from \$24,103,562 in 1934 to \$28,034,426 for 1935. A rather sharp increase was shown in nuts from \$10,932,962 in 1934 to \$15,471,734 in 1935.

The World Situation. Drastic restrictions placed by most European nations on the import of fruits and fruit products continued to exert a depressing influence on the export trade in fresh, dried, and canned fruits from the United States. A succession of spring freezes and frosts in Europe brought about crop reductions that would have normally benefited United States growers were it not for the prohibitive governmental limitations. However, the export season for American deciduous fruits, which closed June 30, was the first in three years in which prices did not have a tendency to decline regardless of size of exports. Fresh and dried apples, and fresh, dried, and canned pear exports were smaller than in 1933-34. Fresh grape shipments were, however, the largest and highest priced since the depression started and represented the one bright spot in the export fruit situation.

The Canadian commercial apple crop was estimated at 12,135,000 bu. by the Fruit Branch of the Canadian Department of Agriculture. This represented a potential export surplus of 6,000,000 bu., a total greater than that exported in the 1934-35 season.

The Australian Apple and Pear Export Control Council coöperating with the Export Council of New Zealand assigned definite export quotas to the several Australasian producing regions and thereby greatly relieved a potentially serious economic situation. A severe freeze in early February caused serious losses to Spanish orange growers not only to the existing crop but to succeeding crops through the killing of many trees. However, due to a bumper crop in Palestine the estimated export crop of oranges and mandarins from the Mediterranean Basin for the 1935-36 season was estimated about the same as for the two preceding years, namely, 35,000,000 boxes.

The 1935 raisin crop in the chief exporting countries of the Mediterranean Basin was 119,000 short tons as compared with 97,200 tons in 1934.

A total of 2801 carloads of fresh vegetables entered the United States and Canada from the West Coast of Mexico during the season ended May, 1935. This was a gain of nearly 1600 cars over the 1934 and 400 over the 1933 periods. Particular gains were shown in tomatoes.

Production of grapefruit continued to increase in the Argentine, attaining a total of approximately 30,000 boxes in 1935. The Puerto Rico crop of grapefruit for the 1935-36 season was set at 700,000 boxes, a gain of 50,000 boxes over the preceding season.

The lowering of the Canadian tariffs on fresh fruits and vegetables as a result of the new reciprocal agreement was expected to greatly stimulate sales of United States products in that country.

Necrology. Dr. David Griffiths, in charge of bulbous flowering plant investigations in the United States Department of Agriculture and widely known for his numerous writings on bulb production and other horticultural subjects, died in Washington, D. C., on March 19.

James A. Neilson, in charge of nut-growing studies at the Michigan State College, died February 11, following an operation for appendicitis. He was particularly well known for his studies in the preservation of nursery plants by paraffining.

E. W. Townsend, one of the leading strawberry plant growers in the United States, died at his home in Salisbury, Maryland, on February 9.

Dr. S. S. Sulliger, president of the American Rose Society and Curator of the International Rose Test Garden at Portland, Oregon, died April 15 at his home in Tacoma, Washington. He was succeeded to the presidency of the rose society by Leonard Barron of Garden City, New York.

O. V. Michurin, often called the Luther Burbank of Russia, died June 7 at the advanced age of 80 years. During his lifetime, he created literally hundreds of new apples, pears, plums, peaches, and berries. The Michurin Fruit Research Station and the city of Michurinsk perpetuate his memory.

Dr. R. C. Knight, Plant Physiologist and Assistant Director of the East Malling Research Station, England, died January 28.

Hugo de Vries (q.v.), world famous for his elucidation of the Mendel theory of inheritance and his own investigations of mutations in plants, died May 21 at the age of 87 years.

Bibliography. A wealth of new horticultural books, particularly relating to ornamental garden-

ing, were published in 1935 and indicated an ever-increasing interest in the subject. Among these were: L. H. and E. Z. Bailey, *Hortus*, New York; L. Barron, *Gardening for the Small Place*, Garden City, N. Y.; M. E. Bottomley, *The Art of Home Landscape*, New York; A. H. Carhart, *Trees and Shrubs for the Small Place*, Garden City, N. Y.; E. E. Keays, *Old Roses*, New York; J. E. Knott, *Vegetable Growing*, Philadelphia; L. H. Leonian, *How to Grow Delphiniums*, Garden City; G. F. Mappin, *Bigger and Better Roses for Garden, House, and Exhibition*, London; H. S. Orloff and H. B. Raymore, *Color and Succession of Bloom in the Flower Border*, Garden City; M. Schling, *Everyman's Garden*, New York; H. B. Sheahan, *Herbs and the Earth*, Garden City; C. Spry, *Flower Decoration*, New York; E. C. Stiles, *Rock Gardening for the Small Place*, Garden City; A. J. Sweet, *Ornamental Shrubs and Trees*, London; L. B. Wilder, *What Happens in My Garden*, New York; H. D. Woodcock and J. Coutts, *Lilies, Their Culture and Management*, London and New York.

HOWARD UNIVERSITY. A nonsectarian coeducational institution in Washington, D. C., open to students without regard to race but principally for the education of Negroes. The registration for the first semester of 1935 was 1745. The faculty numbered 251. The total endowment amounted to \$910,127. The total appropriation of the United States Government for 1935-36 was \$665,000. The Library contained 92,000 volumes. President, Mordecai W. Johnson, S T M., D D.

HUMANISM. A religious movement emphasizing faith in the supreme value and self-improvability of human personality, instead of belief in the supernatural. In the United States it has arisen largely from and in the left wing of Unitarianism, although it is spreading among other liberal religious groups, including the Universalists and Congregationalists. A careful conservative estimate would indicate at least 15,000 avowed Humanists in the United States. There were in 1934 only seven local societies—in Hollywood and Berkeley, Calif., Kansas City, Mo., Sioux City, Iowa, Chicago (two), and New York City—but some 50 or more Unitarian churches were led by ministers who have openly announced their belief in Humanism. Groups avowing beliefs identical with Humanism, or essentially the same, have been reported in Canada, Australia, England, Germany, Turkey, and India.

In May, 1933, 34 eminent leaders of American thought, including six university professors of philosophy, signed and issued a Humanist Manifesto of 15 theses, setting forth the main points of religious Humanism. The complete text, together with the names of the signers, is available in the book *Humanizing Religion*, by Charles Francis Potter. Among the periodicals of the movement are the *Humanist World*, published weekly in Hollywood, and the *New Humanist*, published bi-monthly in Chicago. At the call of Charles Francis Potter, founder and leader of The First Humanist Society of New York (established, 1929), the first national Humanist Assembly was held at the New York headquarters, 113 West Fifty-seventh Street, Oct. 10-11, 1934.

A library, reading room, and information bureau are maintained at the New York headquarters.

HUNGARY. A kingdom of central Europe. Capital, Budapest. Regent in 1935, Nicholas Horthy de Nagybánya (elected Mar. 1, 1920).

Area and Population. With an area of 35,875 square miles, Hungary had a population estimated

in 1934 at 8,894,920 (8,688,319 at 1930 census). Of the 1934 total, 2,938,488 resided in urban communities of over 10,000. The 1930 population was 92.1 per cent Magyar, 5.5 per cent German, and 1.2 per cent Slovak. Living births in 1934 totaled 189,562; deaths, 127,779; marriages, 77,672. Populations of the chief cities in 1934 (estimated) were: Budapest, 1,035,665; Szeged, 138,144; Debrecen, 122,817; Kecskemét, 81,363; Pesterzsébet, 77,753; Újpest, 71,535; Kispeszt, 71,060; Pécs, 67,522. In 1930 64.9 per cent of the population was Roman Catholic; 27 per cent Protestant; 5.1 per cent Jews; 2.3 per cent Greek Catholics.

Education. The 1930 census showed that 9.6 per cent of the population over six years of age was illiterate. In 1930-31 there were 1,223,130 persons of school age (6 to 14 years). In 1932-33 primary school enrollment was 997,427; secondary, 65,327; university, 11,034. In addition there were numerous special schools and high schools.

Production. Agriculture is the principal occupation. In 1933 there were 13,832,000 acres of arable land, 793,000 acres of vineyards and gardens, 4,106,000 acres of meadow and pasture, and 2,710,000 acres of woods and forests. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in thousands of units): Wheat, 64,824 bu. (96,356); rye, 24,381 bu. (37,655); barley, 24,983 bu. (38,649); oats, 17,869 bu. (24,637); corn, 82,740 bu. (71,230); potatoes, 77,848 bu. (68,182); sugar beets, 925 metric tons (946); fodder beets, 2974 metric tons in 1933; wine (must), 66,878 gal. (81,455); tobacco, 40,040 lb. (52,583). The production of beet sugar in 1934-35 was 120,000 metric tons (136,000 in 1933-34). Livestock in 1934 included 1,678,000 cattle, 2,502,000 swine, 1,087,000 sheep, 803,000 horses, and 26,000 goats. The estimated value of agricultural production during the economic year 1934-35 was 1,053,000,000 pengős (744,000,000 in 1933-34).

Mineral and metallurgical production in 1934, with 1933 figures in parentheses, was (in 1000 metric tons): Coal, 756 (800); lignite, 6199 (5907); iron ore, 50 (50); pig iron, 140 (93); steel, 315 (228). The value of manufactured production in 1933 was 1,763,429,000 pengős, the most important lines being: Food products and tobacco, 602,961,000 pengős; textiles, 375,842,000 pengős; iron, metal, and machinery, 265,215,000 pengős; chemicals, 178,931,000 pengős.

Foreign Trade. Excluding bullion, imports in 1934 were valued at 344,755,000 pengős (312,643,000 in 1933) and exports at 405,336,000 pengős (391,337,000 in 1933). The value of the principal imports in 1934 was (in 1000 pengős): Raw cotton, 26,373; wood and wood products, 32,950; hides and skins, 17,405; chemicals and drugs, 16,189; non-ferrous metals, 13,210; paper, 12,283. The chief exports were (in 1000 pengős): Wheat, 54,188; electrical machinery, 33,916; poultry, 28,854; cattle, 17,680; swine, 16,407. Austria supplied 23.7 per cent of the 1934 imports by value; Germany, 18.2 per cent; Italy, 12 per cent; Rumania, 8.8 per cent; Czechoslovakia, 7 per cent; United States, 5.7 per cent. Of the 1934 exports Austria purchased 24.5 per cent; Germany, 22.1; Italy, 8.3; United Kingdom, 7.8; Czechoslovakia, 5 per cent.

Imports in 1935 totaled 398,000,000 pengős; exports, 459,000,000 pengős. United States statistics for 1935 showed imports from Hungary of \$3,164,081 (\$1,500,589 in 1934); exports to Hungary, \$350,675 (\$493,695 in 1934).

Finance. Budget estimates for the fiscal year

ending June 30, 1936, placed receipts at 1,100,000,000 pengös and expenditures at 1,176,000,000 pengös. For 1934-35 the respective estimates were 1,085,000,000 and 1,151,000,000 pengös. Closed accounts for 1933-34 showed total ordinary and extraordinary receipts of 1,095,500,000 pengös and expenditures of 1,137,500,000 pengös, the deficit being 42,000,000 pengös. The public debt on Mar. 31, 1935, totaled 1,663,100,000 pengös (domestic, 382,300,000; foreign, 1,280,800,000), compared with a total of 1,623,900,000 pengös on June 30, 1934. The par value of the pengö was \$0.1789 before devaluation of the U. S. dollar in January, 1934, and \$0.2961 afterwards. The exchange value averaged \$0.1741 in 1932, \$0.2236 in 1933, and \$0.2957 in 1934.

Communications. In 1934, there were 5372 miles of railway line (state lines, 4050 miles); about 18,125 miles of highways (state roads, 2642 miles); and six air lines, which in 1933 carried 7565 passengers and 428 metric tons of freight.

Government. Hungary is a constitutional monarchy with the throne vacant, power being exercised by the Regent pending the selection of a monarch. There is a Legislature of two houses—the Lower House of 245 members elected for five years and the Upper House of 252 elected or appointed representatives of various social, economic, and political groups, the term being 10 years. Premier and Minister of War in 1935, Gen. Julius Gömbös, leader of the National Union Party, who assumed office Oct. 1, 1932.

HISTORY

Internal Politics. The parliamentary elections of March 31, which returned Premier Julius Gömbös to power with an overwhelming majority in the Lower Chamber, was the principal development in internal politics during 1935. The election freed the Premier of both the tutelage of Count Stephen Bethlen, the dominant political influence in Hungary for more than a decade, and of dependence upon Tibor Eckhardt's Independent Small Farmers party for majority control of the Lower Chamber. It thus enabled Gömbös to steer his government on a middle course between the powerful but reactionary landed aristocracy led by Bethlen and the more radical groups under Eckhardt and others demanding redistribution of the large estates and the thorough-going reform of Hungary's semi-feudal economic and social institutions.

The struggle between these opposing forces during 1935 revolved mainly around the issue of reform of the antiquated electoral system. Voting in Hungary was secret only in the towns, the landlords having secured retention of the old system of oral voting in the country districts in order to keep the peasants under control. Pressure from the Small Farmers' party, the Social Democrats and others had forced Premier Gömbös during preceding years to promise the extension of the secret ballot to rural communities. Yet Count Bethlen's dominant influence in the government, or National Union party, prevented the Premier from fulfilling his promise.

Early in 1935 it became evident that he had determined to end this dilemma by breaking Bethlen's power. On January 8 he forced Minister of Agriculture Nicholas Kallay, an adherent of Bethlen's, to withdraw from the cabinet. On January 29 he submitted to the government party the draft of a bill for a conditional extension of the secret ballot. While this represented a blow at Bethlen,

it did not go far enough to please the proponents of the secret ballot. Tibor Eckhardt, leader of the Small Farmers, resigned as Hungarian representative at Geneva on January 30 to lead the growing opposition to the Gömbös régime.

When Parliament reconvened on March 5 the government hurriedly introduced its electoral reform bill, coupled with legislation increasing the powers of the Regent and restoring a law enacted in 1914 for control of the Opposition press. Vigorous Opposition attacks upon these measures were answered by the dissolution of Parliament and the calling of new elections. That the election represented a trial of strength between Count Bethlen and the Premier was indicated by the former's statement of March 29 denouncing the Gömbös policies and predicting that the latter would shortly seek to establish a Fascist régime.

The elections were held under the old electoral system, with secret voting taking place in the cities on March 31 and oral voting in the rural districts a week later. The extent of the Premier's victory is indicated by the following results showing the standing of the parties in the new and the old Parliaments, respectively: National Union Party, 172 (148); Independent Small Farmers, 24 (22); Christian Nationals, 14 (26); Social Democrats, 11 (14); Liberals, 7 (7); Legitimists, 3 (7); Nazis, 2 (2); others, 12 (19). Count Bethlen was re-elected but without any parliamentary group behind him. The Legitimist movement suffered a severe setback, the Social Democrats and Christian Nationals were weakened, and Premier Gömbös obtained a firm grip upon the government. The electoral campaign was marked by the large degree of freedom granted all parties to present their cases. The large majorities polled by the Gömbös party in secret as well as in oral voting indicated that it was the unquestioned choice of the majority of the voters.

Legitimist Agitation. Except for a revival of anti-Semitic riots and demonstrations in Budapest in November the issue of the restoration of the monarchy was the principal object of discussion during the remainder of the year. The Legitimists, favoring the restoration of the Hapsburg dynasty in the person of Archduke Otto, were handicapped in their campaign not only by the open opposition of the Gömbös régime, which favored continuation of the Regency indefinitely, but also by Otto's declaration of December, 1934, approving the Fascist-corporative state as against the democratic form of government. Father Nicholas Grieger, leader of the Legitimist Hungarian Populist party, hurried to Otto's residence in Belgium and returned on January 13 with a formal statement from the young Archduke declaring that "as King of Hungary I respect the thousand-year-old Hungarian Constitution and would rule over that country as a constitutional King."

Premier Gömbös reiterated in Parliament on May 28 his stand that the question of restoration of the monarchy could be settled only in a more peaceful atmosphere. When Austria on July 10 repealed the laws for exclusion of the Hapsburgs, Gömbös protested to Chancellor Schuschnigg against permitting Otto to return to Austria, where his presence would increase Legitimist activity in Hungary. As a result the Austrian Government was said to have warned the Archduke not to return to Austria for the time being. See AUSTRIA under *History*. The dangerous implications of the restoration issue were again emphasized by the Foreign Ministers of the Little Entente (q.v.)

during their conference at Bled, Yugoslavia, on August 29-30. They reaffirmed their steadfast opposition to a Hapsburg restoration either in Austria or Hungary.

Foreign Relations. Revision of the territorial clauses of the Treaty of Trianon remained as in previous post-war years the great and all-important aim of Hungarian foreign policy. Hope that Hungary would receive the aid of Italy in securing restoration of its former territories by force faded early in 1935 with the conclusion of the Franco-Italian understanding of January 7 (see FRANCE and ITALY under *History*). Thereafter Mussolini insisted that Hungary should use only peaceful means in regaining its former possessions. His position forced Hungary to accept a friendly settlement of its quarrel with Yugoslavia over the harboring in Hungary of Croat terrorists, a quarrel which produced a serious European crisis late in 1934 (see 1934 YEAR BOOK, pp. 302-303, 756). This incident was officially closed at the May, 1935, session of the League Council, when Yugoslavia accepted a Hungarian report admitting that some minor Hungarian officials had not "kept as close an eye on Croatian emigrants as was desirable and necessary." The report further stated that it was impossible to establish any connection, direct or indirect, between the Hungarian Government and the assassination of King Alexander of Yugoslavia at Marseille, France, in October, 1934. On January 14 a mixed Hungarian-Yugoslav commission was established to settle mutual difficulties and frontier irritations.

While the abortive Franco-Italian plans for a Danubian settlement reconciling Austria, Hungary, and Bulgaria with the Little Entente were still under discussion, a meeting of Hungarian, Italian, and Austrian representatives took place at Venice the first week in May. The other two powers agreed to support Hungary's demand for a larger army in return for Hungary's guarantee of Austrian independence against Germany. Mussolini also reiterated his willingness to give moral support to Hungary's demand for frontier rectifications. In line with this understanding, Premier Gombos stated in Parliament on May 28 that Hungary would not attempt unilateral denunciation of the Trianon Treaty in the German fashion but would wait until the powers granted her equality. At the same time he presented Hungary's desire for the restoration of military conscription and the right to rearm equally with the Little Entente.

Despite severe criticism from the Opposition parties in Parliament, the Gombos Government in October refused to join with the other League states in punishing Italy's aggression upon Ethiopia by the application of economic sanctions. See LEAGUE OF NATIONS. This policy was explained not only on the ground of Hungary's political ties with Italy, but also by economic factors. In the first six months of 1935, Hungary sent 15 per cent of all her exports and 52 per cent of all wheat exports to Italy.

While still cherishing hopes of aid from Italy in achieving Hungary's territorial objectives, Premier Gombos continued his negotiations with Nazi Germany. He visited Berlin late in September, apparently in hope of effecting a reconciliation between Mussolini and Hitler and establishing an anti-treaty bloc including both Germany and Italy.

As Italy became increasingly absorbed in her costly war with Ethiopia and her threatening quarrel with Britain and the League, Mussolini's influence in Central Europe declined. Hungary,

like several neighboring states, turned more and more towards Germany. As the year drew to a close Premier Gombos was reported to be deep in negotiations for the establishment of an anti-Soviet alliance of Germany, Hungary, and Poland. It aimed at carving up Czechoslovakia among these three States and thus eliminating Czechoslovakia as an ally of the Soviet Union and a possible base of Soviet expansion westward. See AUSTRIA, CZECHOSLOVAKIA, GERMANY, ITALY, and POLAND under *History*.

The Standstill Agreement on Hungarian debts owed in the United States and Great Britain, which expired July 4, 1935, was extended to July 15, 1936.

HUNTER COLLEGE OF THE CITY OF NEW YORK. A college of liberal arts and sciences in New York City. Established in 1870 for the higher education of women. Maintained by public funds, it is one of the three municipal colleges governed by the Board of Higher Education, the other two being The City College for men and Brooklyn College for men and women. The enrollment for the fall semester of 1935 included 6906 students in the Day Session and 5093 students in the Evening and Extension Sessions. The enrollment in the summer session of 1935 was 3238. The teaching staff for Day, Evening, and Extension Sessions for the fall semester of 1935 numbered 596. The library contained 76,042 volumes. President: Eugene A. Colligan, Ph.D.

HYDROGEN. See CHEMISTRY.

ICELAND. An island state northwest of Great Britain. Area, 39,700 sq. miles; population (1930 census), 108,861 compared with 113,353 (1934 estimate). Chief towns: Reykjavik (capital), 31,689 persons in 1933; Akureyri, 4243; Hafnarfjörður, 3748; Vestmannaeyjar, 3462. In 1933 there were 2478 living births, 1159 deaths, and 696 marriages.

Production and Trade. The main agricultural crops were potatoes, turnips, and hay. Livestock in the country in 1933: 45,400 horses, 31,900 cattle, 729,000 sheep, and 2800 goats. The sea fisheries in 1932 totaled 212,700 metric tons valued at 23,827,000 krónur. In 1934, imports were valued at 48,482,000 krónur; exports, 44,761,000 krónur. Imports consisted mainly of textiles, metals, machinery, timber, coal, and cereals; the chief exports were canned and fresh fish, tallow, and oils. The Icelandic Exchange Control Office declared that during 1935 imports would be limited to 35,000,000 krónur.

Government. Budget estimates for 1935: revenue, 13,762,990 krónur; expenditure, 13,109,041 krónur. The public debt on Jan. 1, 1934, was 39,958,182 krónur. Iceland is in union with Denmark because of its allegiance to the King of Denmark. Executive power rests with the King who acts through a responsible ministry; legislative power rests conjointly with the King and the Althing (Parliament) of 49 members (one-third elected to the Upper House by the whole Althing, the remainder formed the Lower House). King in 1935, Christian X; Prime Minister, Hermann Jónasson (Progressive).

IDAHO. Population. On Apr. 1, 1930 (Fifteenth Census), 445,032; on July 1, 1934, by latest Federal estimate, 448,000; 1920 (Census), 431,866. Boise, the capital, had (1930) 21,544 inhabitants.

Agriculture. The table on page 314 shows the acreage, production, and value of the principal crops for 1935 and 1934.

Mineral Production. The mining of metals in 1935 was marked by an important rise in the output of silver, which took first rank, for value,

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) ...	1935	1,047,000	2,249,000*	\$14,843,000
	1934	1,016,000	2,095,000*	18,017,000
Wheat	1935	944,000	20,158,000	14,111,000
	1934	906,000	18,696,000	12,878,000
Potatoes	1935	89,000	17,800,000	9,790,000
	1934	106,000	19,610,000	9,413,000
Sugar beets	1935	53,000	561,000*	.....
	1934	34,000	294,000*	1,379,000
Dry beans	1935	128,000	1,306,000*	3,069,000
	1934	122,000	1,342,000*	4,227,000
Apples	1935	.....	5,934,000	3,976,000
	1934	.....	3,312,000	2,716,000
Barley	1935	154,000	5,236,000	2,042,000
	1934	134,000	4,288,000	2,187,000
Oats	1935	152,000	5,168,000	1,550,000
	1934	132,000	4,488,000	1,750,000
Corn	1935	38,000	1,558,000	1,168,000
	1934	38,000	1,520,000	1,246,000

* Tons. † 100-lb. bags.

among the metals produced; the output of lead, next in importance, increased also, as did that of zinc, but that of gold diminished slightly, and the output of copper remained comparatively small.

The yearly total, by value, of the mines' production of the five metals rose to \$19,453,700 (1935) from \$15,277,669 (1934). The quantity of gold that was produced dropped to 83,800 fine ounces for 1935, from 84,817 for 1934; the corresponding value for 1935 was \$2,933,000. The mines yielded (1935) 10,150,000 ounces of silver, as against 7,394,143 (1934); the total by value of the metal rose, by reason of higher prices, yet more notably, to \$7,490,700 (1935), from \$4,780,052 (1934). The production of lead increased to 152,800,000 pounds for 1935, from 142,648,216 for 1934; by value to \$6,112,000 (1935), from \$5,277,894 (1934). Zinc was produced to the quantity of 59,600,000 pounds (1935), as against 49,598,651 (1934); and to the value of \$2,741,600 (1935), as against \$2,132,742 (1934).

Education. The inhabitants of school age, as reported in 1935, numbered 144,840. For the academic year 1934-35, enrollments in the public schools totaled 118,755. Of these, 87,047 were in common schools or elementary grades, and 31,708 were in high schools. The year's expenditures for public-school education throughout the State totaled \$9,084,878. Teachers' yearly salaries averaged \$902.92.

The Legislature granted funds in 1935 additional to those provided by the equalization law of 1933, according to the *Journal* of the National Education Association; all public schools were enabled to give at least seven months of instruction. A permanent textbook commission was established, and a Statewide alteration of the curriculum was started.

Charities and Corrections. The government of the State, under the system in operation in 1935, included a Department of Public Welfare, headed by a Commissioner (Lewis Williams). This Department held authority over the State's mental hospitals and certain other State institutions; it administered the system of pensions for the elderly, conducted work to combat tuberculosis, and performed the approximate functions of a State Board of Health. It acquired in December a Public Health Adviser (Dr. J. D. Dunshee), obtained with the assistance of the Rockefeller Foundation. A separate prison board composed of the Governor, Attorney-General, and Secretary of State directed the Penitentiary, at Boise.

The institutions under the Department of Public Welfare were: State Hospital North, at Orofino; State Hospital South, at Blackfoot; State School and Colony, at Nampa; Idaho Soldiers' Home,

Boise; School for the Deaf and Blind, at Gooding; and Industrial School, St. Anthony.

Legislation. The regular biennial session of the Legislature created a system for the sale of alcoholic liquor through a State monopoly operating State retail shops. The proposed amendment to the Federal Constitution, dealing with child labor, received the State's ratification. A moratorium of five years was granted to those owing taxes already in arrears (estimated to total \$18,000,000). Banks under State charter were authorized to lend money on obligations of house owners, as insured under the Federal Housing Act. Purchasers of timber lands from the State were required to manufacture in Idaho the timber cut from such lands. Congress was urged, in a memorial, to enact the Townsend plan for the payment of high pensions to the aged. A tax on retail sales was enacted.

Political and Other Events. The FERA notified Idaho on March 1 that it intended to withhold allotments for the support of the State's destitute unemployed until the State should contribute a required part of the needed sum. The FERA was reported to have met over 90 per cent of the cost of such support in the State in 1934, paying \$7,019,373; of the rest, \$6561 came from the State's funds and \$597,480 from those of subdivisions.

Officers. The chief officers of the State, serving in 1935, were: Governor, C. Ben Ross; Lieutenant-Governor, Gainford P. Mix; Secretary of State, Franklin Girard; Auditor, Harry C. Parsons; Treasurer, Myrtle P. Enking; Attorney-General, Bert H. Miller; Superintendent of Public Instruction, John W. Condie; Inspector of Mines, Arthur Campbell.

Judiciary. Supreme Court: Chief Justice, Raymond L. Givens; Associate Justices, Alfred Budge, William M. Morgan, Edwin M. Holden, James F. Ailshie.

IDAHO, UNIVERSITY OF. A coeducational State institution of higher learning at Moscow, Ida., founded in 1889, with a southern branch at Pocatello. The total enrollment at Moscow in the autumn of 1935 was 2475, and at Pocatello 850. The enrollment for the 1935 summer session was 896. The faculty numbered 180. The productive funds amounted to \$2,184,727, and the income for 1934-35 was \$1,048,734. The library contained approximately 100,000 volumes. President, Mervin Gordon Neale, Ph.D.

ILLINOIS. Population. On Apr. 1, 1930 (Fifteenth Census), 7,630,654; on July 1, 1934, by latest Federal estimate, 7,876,000; 1920 (Census), 6,485,280. Chicago, the chief city, had (1930) 3,376,438 inhabitants; Peoria, 104,969; Springfield, the capital, 71,864.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	7,589,000	288,382,000	\$158,610,000
	1934	7,159,000	146,760,000	115,940,000
Hay (tame) ..	1935	2,514,000	5,780,000*	28,350,000
	1934	2,630,000	2,657,000*	37,995,000
Wheat	1935	1,849,000	26,800,000	22,241,000
	1934	1,854,000	29,495,000	25,081,000
Oats	1935	3,847,000	107,716,000	28,006,000
	1934	3,029,000	33,319,000	14,327,000
Soy beans	1935	1,213,000	21,834,000	15,065,000
	1934	542,000	10,298,000	9,268,000
Potatoes	1935	50,000	4,050,000	3,038,000
	1934	52,000	2,704,000	2,650,000

* Tons.

Mineral Production. In 1935 the output of coal totaled 43,845,000 net tons as against 41,272,-

384 net tons in 1934. From 2,445,817 tons of coal consumed in by-product coke ovens in 1934, 1,649,907 net tons of coke, valued at \$9,071,800, were produced. The shipments of furnaces engaged in the production of pig iron, from ores brought into the State, rose to 1,430,841 gross tons for 1934, from 1,269,940 for 1933; in value, to \$25,768,115, from \$20,063,481. The production of petroleum increased to 4,452,000 barrels (1934), from 4,244,000 (1933).

Education. The latest total figures as to the operation of the public schools dealt with the year ended June 30, 1934. For that year the number of inhabitants of school age was stated as 2,788,382. There were enrolled in the public schools 1,384,651 pupils. Of these, 1,043,458 were in common schools or elementary grades; in high schools, 341,183. The year's current expenditures for public-school education in the State totaled \$95,835,729. The salaries of teachers, by the year, averaged \$1305.81. While the amount of State aid to public schools was increased by one-fifth in 1935, this failed to end the financial trouble of the poorer school districts. The revision of the curriculum for schools throughout the State was undertaken, under the leadership of the Superintendent of Public Instruction.

Charities and Corrections. Under the system in force in 1935 a Department of Public Welfare, created by the civil administrative code of 1917, held the central authority over the State institutions of care and custody.

The State institutions under the Department's authority and their populations of November 1, 1935, were: State mental hospitals, at Elgin, Chicago, Kankakee, Manteno, Peoria, Jacksonville, East Moline, Alton, Anna, and Chester, having among them 26,446 patients; penitentiaries at Joliet and Menard, a Boys' Reformatory at Pontiac, a State Farm (for misdemeanants) at Vandalia, and a Women's Reformatory at Dwight, among which were 11,687 inmates; institutions for the feeble-minded, at Dixon and Lincoln, 6899; Illinois School for the Deaf, Jacksonville, 584; Illinois School for the Blind, Jacksonville, 228; Industrial Home for the Blind, Chicago, 93; Illinois Soldiers' and Sailors' Home, Quincy, 749; Soldiers' Widows' Home, Wilmington, 110; Illinois Eye and Ear Infirmary, Chicago, 187; Soldiers' and Sailors' Children's School, at Normal, 660; Research and Educational Hospitals, Chicago, 356; School for Boys (delinquent), St. Charles, 573; State Training School for Girls (delinquent), Geneva, 263. Persons released, but still under parole, from State institutions numbered some 6200.

Legislation. After months of struggle over Governor Horner's proposal to raise the rate of the sales tax, the Legislature enacted, on May 22, an increase of this rate to 3 per cent, from 2 per cent. The higher rate was rendered necessary by the insistence of the FERA that the State contribute at least \$36,000,000 a year to the support of its destitute unemployed. The act was not passed until the FERA had suspended its own grants and the last funds for the purpose had been used up. The antagonism to the higher tax was ascribed partly to the unpopularity of the entire tax, partly to resentment at what was thought Federal dictation to the Legislature, and in some measure to Republican partisan tactics. A separate act applied the 3 per cent sales tax to municipal and corporate public utilities' sales.

A system of State pensions for old people was created, in conformity with the requirements for

qualifying the State to receive Federal grants toward such pensions under the Social Security Act. Employers were compelled by statute to allow employees one period of 24 hours without work in every week, except for a few specified types of employment. The State's fund for distribution to schools was increased to \$13,000,000, from \$10,500,000. The private right of civil action for alienation of affection and for breach of promise to marry was annulled by statute taking effect July 1. The State Senate investigated a charge made by Charles R. Walgreen that the University of Chicago disseminated radical views in its teachings.

Political and Other Events. The public dispensation of support to the unemployed poor was largely suspended for a while in May, after the Federal grants had been halted (see *Legislation*, above), and while the Legislature still delayed passing a higher sales tax to provide for the greater State contribution to the cost of such support. Many whose allowances were cut off or cut down migrated beyond the State's borders in search of public support. The Federal grants were resumed on May 24. In connection with the administration of the amended sales tax the State issued aluminum tokens in denominations of mills, so as to permit purchasers' paying the tax, to fractions of a cent. The question of the State's power to issue such tokens was raised by the Federal Treasury but was not brought into the courts. The sales tax yielded, at the old rate of 2 per cent, \$21,560,197 for the first half of 1935.

As reported by the FERA on March 1, the combined distributions of money for the relief of the needy unemployed in Illinois during 1934 totaled some \$107,000,000, of this the FERA gave \$72,280,869, or 67.6 per cent; the State, \$30,485,359, localities, \$4,241,800.

Peace was disturbed in September and October by disorders in the course of a strike of dairy farmers, for higher prices. Efforts were made to cut off the milk supply of Chicago by stopping tank trucks and milk trains. The State Circuit Court invalidated a statute that sought to allow the payment of taxes for 1932 and earlier years in installments with remission of penalties. After Samuel and Martin Insull had been acquitted in a series of trials based on their alleged acts in connection with the failure of the Middle West Utilities Company in 1932, the State dropped the remainder of its charges against them.

Mayor Edward J. Kelly, Democrat, of Chicago was reelected on April 2, by a remarkable plurality, receiving almost five times as many votes as his Republican opponent, Emil C. Wetten. The Treasurer of Cook County, Robert M. Sweitzer, was removed on June 6 by the county commissioners, on an allegation that a serious shortage had been found in his accounts in his former post of County Clerk.

The Chicago City Council voted in December an ordinance whereby the city, to start with the following March 1, was to adopt Eastern Standard time permanently as an all-year standard. The ordinance did not provide for pushing the clocks a second hour ahead in summer, as would be necessary to synchronize Chicago with New York's summer standard of time.

Officers. The chief officers of the State, serving in 1935, were: Governor, Henry Horner; Lieutenant-Governor, Thomas F. Donovan; Secretary of State, Edward J. Hughes; Auditor, Edward J. Barrett; Treasurer, John Stelle; Attorney-

General, Otto Kerner; Superintendent of Public Instruction, John A. Wieland.

Judiciary. Supreme Court: Chief Justice, Clyde F. Stone; Associate Justices, Norman L. Jones, Paul Farthing, Lott R. Herrick, Elwyn R. Shaw, Warren C. Orr, Francis S. Wilson.

ILLINOIS, UNIVERSITY OF. A coeducational State institution of higher learning in Urbana-Champaign, Ill., founded in 1867, with professional schools of medicine, dentistry, and pharmacy located in Chicago. The enrollment in the autumn of 1934 was 11,528, of whom 8531 were men and 2997 were women. The summer session enrollment was 2793 of whom 1611 were men and 1182 were women. The number of persons on the teaching staff above the rank of assistant was 700. The income for the year 1934-35 was \$5,968,357, of which \$3,818,093 was from the State. The productive funds from Federal endowment totaled \$649,013 and from private gifts, \$459,641. The library contained 1,006,000 volumes and 250,000 pamphlets. President, Arthur Cutts Willard, B.S., D.Eng., LL.D.

ILLUMINATION. See ELECTRICAL ILLUMINATION.

"I'M ALONE" CASE. See UNITED STATES under *Administration*.

IMMIGRATION. Net Departures Decrease. In 1935 the movement of aliens out of the United States declined sharply once more, confirming the trend which was first observed in 1934. As shown in Table I, the excess of departures dropped from 67,719 in 1932, to 57,013 in 1933, to 10,301 in 1934, and to 3878 in 1935. Nevertheless, in the five years ending with 1935, the total net outward movement of aliens was over 100,000, leaving a net inward movement for the 28 years from 1908 to the present day of 8,300,211. It is interesting to note that not until the present depression did an excess of departures over arrivals appear, and that the outward movement promises to come to a stop if conditions improve in the United States and fail to better themselves in foreign lands.

An analysis of the figures on the movement by States shows that New York continues to be the most important centre of the movement, and that

TABLE I—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, YEARS ENDED JUNE 30, 1908, TO 1935, SHOWING ANNUAL EXCESS

	<i>During</i>	<i>Immigrant aliens admitted</i>	<i>Emigrant aliens departed</i>	<i>Excess</i>
1908		782,870	395,073	387,797
1909		751,786	225,802	525,984
1910		1,041,570	202,436	839,134
Total, 3 years		2,576,226	823,311	1,752,915
1911		878,587	295,666	582,921
1912		838,172	333,262	504,910
1913		1,197,892	308,190	889,702
1914		1,218,480	303,338	915,142
1915		326,700	204,074	122,626
1916		298,826	129,765	169,061
1917		295,403	66,277	229,126
1918		110,618	94,585	16,033
1919		141,132	123,522	17,610
1920		430,001	288,315	141,686
Total, 10 years		5,735,811	2,146,994	3,588,817
1921		805,228	247,718	557,510
1922		309,556	198,712	110,844
1923		522,919	81,450	441,469
1924		706,896	76,789	630,107
1925		294,314	92,728	201,586
1926		304,488	76,992	227,496
1927		335,175	73,366	261,809
1928		307,255	77,457	229,798
1929		279,678	69,203	210,475
1930		241,700	50,661	191,039
Total, 10 years		4,107,209	1,045,076	3,062,133
1931		97,139	61,882	35,257
1932		35,576	103,295	— 67,719
1933		23,068	80,081	— 57,013
1934		29,470	39,771	— 10,301
1935		34,956	38,834	— 3,878
Total, 5 years		220,209	323,863	— 103,654
Total, 28 years		12,639,455	4,339,244	8,300,211

under "No Occupation" (22,488 and 14,267 respectively), but whereas 1705 of the immigrants were laborers, 11,032 of the emigrants fell in this category. At the other end of the scale, there were 2277 professionals among the immigrants and 2040 among the emigrants, this category almost achieving a balance. The details will be found in Table II.

TABLE II—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED, YEARS ENDED JUNE 30, 1932 TO 1935, BY PRINCIPAL OCCUPATIONS

<i>Occupations</i>	<i>Immigrants</i>			<i>Emigrants</i>		
	1932	1933	1934	1932	1934	1935
All occupations	35,576	23,068	29,470	34,956	103,295	80,081
Professional	2,538	1,631	2,128	2,277	2,827	2,367
Commercial	1,133	785	1,275	1,387	2,771	2,374
Skilled	2,831	2,375	3,180	3,786	13,301	11,125
Servants	1,232	550	805	1,418	5,317	4,979
Laborers	1,372	978	1,346	1,705	35,619	26,499
Miscellaneous	1,406	1,203	1,607	1,895	5,449	4,412
No occupation	25,064	15,546	19,129	22,488	38,011	28,325

in 1935 the arrivals (13,660) nearly balanced the departures (13,675). The only other States showing figures at all comparable were those known to have large Mexican populations and this movement is considerably complicated by the fact that there has been an "involuntary" emigration of Mexican nationals of unknown extent. For example, during 1935 Texas received but 843 immigrants, while there were 4336 emigrants; and California received 2843 immigrants and had 4434 emigrants. Other States showing a high rate of movement were well-known to be industrialized and urbanized areas containing large groups of aliens: Illinois, Massachusetts, Michigan, and Pennsylvania. Occupationally, the largest group of both immigrants and emigrants were classified

Citizenship Petitions. Petitions for citizenship increased from 112,629 in 1933, the low point during the last five years, to 131,378 in 1935, a figure still about 15,000 short of the peak of the last five years, reached in 1931. Certificates of citizenship granted increased from 113,363 in 1933 to 118,945 in 1935. (For details see Table III.) This renewal of an upward movement in the naturalization figures was attributed by the Bureau of Immigration to the following causes: the desire of aliens to become eligible for old age pensions under the social security act; to be eligible for jobs under the WPA programme; to avoid deportation to Europe, accentuated by the unrest in Europe; to improve the chances of gaining employment; and to become eligible for civil service appointments.

TABLE III—DECLARATIONS OF INTENTION AND PETITIONS FOR CITIZENSHIP FILED AND CERTIFICATES OF NATURALIZATION ISSUED, YEARS ENDED JUNE 30, 1907 TO 1935

Period of year	Declarations		Petitions		Certificates	
		Civilian	Military	Total	Civilian	Military
Grand total, 29 years, 1907-35	6,457,511	3,757,991	309,374	4,067,365	3,332,438	307,529
Total, 1907-10	526,322	164,036	.....	164,036	111,738	.....
Total, 1911-20	2,686,909	1,137,084	244,300	1,381,384	884,672	244,300
Total, 1921-30	2,709,014	1,827,073	57,204	1,884,277	1,716,979	56,206
Total, 1931-35	535,266	629,798	7,870	637,668	619,049	7,023
1931	106,272	142,249	3,225	145,474	140,271	3,224
1932	101,345	131,043	19	131,062	136,598	2
1933	83,046	110,604	2,025	112,629	112,368	995
1934	108,079	114,524	2,601	117,125	110,867	2,802
1935	136,524	131,378	....	131,378	118,945	...

It will be noted that most of these reasons have an obvious economic significance and call attention to the fact that the alien in the United States suffers even more marked employment disabilities in times of depression than in "normal" times.

There must, nevertheless, always remain a sizable alien population within the American borders, for thousands of immigrants are unable to read and write the English language with sufficient skill to qualify for citizenship. On the other hand, the Commissioner of Immigration has announced that he intends to cooperate with the trend by seeking to eliminate the chances of an alien being disqualified for citizenship by the use of "trick" questions and requests for information which few native born citizens could produce on demand. He regards it as of the first importance that aliens be given every opportunity to regularize their status in this period of social turmoil.

Anti-Alien Measures. One of the most formidable anti-alien measures ever proposed was intermittently debated during 1935. Congressman Martin Dies of Texas initiated agitation for a measure whereby approximately 6,000,000 aliens (his calculation) would be deported as a means of solving the unemployment problem. In favor of this bill he instanced the restrictions on the employment in force in France, Germany, Italy, and other European countries, and also the measures taken by these same countries to deport alien workers as the unemployment figures mounted. Congressman Dies's argument is deceptively simple: he asserts that the unemployment problem would never have assumed such serious and unprecedented proportions, and it is not improbable that a large surplus would have been unknown in this generation, if the nation had excluded the 20,000,000 or more aliens that have joined the competitive ranks of labor, agriculture, and business.

In June, 1935, Mr. Dies announced that 155 organizations representing 5,000,000 people supported his measure; that he had received 50,000 unsolicited letters and telegrams in support of it, and that at least 150 Congressmen favored his bill. As planned, this bill would provide that no alien can hold a job in this country that can be filled by a citizen. Mr. Dies hoped to enlist 10,000,000 citizens as voluntary propagandists for his programme. It is worth noting in passing that Mr. Dies comes from Texas, one of the centres of involuntary emigration of Mexican laborers, a movement which has taken an unknown number of American-born children out of the country. The status of these "deported" Americans is at present an unexplored field. Finally, while it is not known how many of those currently employed are aliens, nor how many of those currently unemployed, but it is estimated that but 3 per cent of those on relief are aliens, a "normal" proportion, and an indication of the economic sufficiency of this group in the population.

The Alien Radical. Closely related to the proposal of Congressman Dies are the various and sundry measures suggested and actually taken for the deportation of alien "radicals." This issue is always raised in the case of strikes, and during both 1934 and 1935 the agents of the Bureau of Immigration were repeatedly accused of "breaking" strikes by arresting leaders on the allegation that they were illegally in the country. An important indication of the significance of this activity, both as to its extent and the number of radical aliens actually picked up in this fashion, is furnished by a report on arrests in several strike areas, including the San Francisco general strike of 1934, released during 1935. Of 448 persons arrested, Commissioner of Immigration MacCormack found that 330 were indisputably American citizens "for the most part by birth," 118 were aliens of whom not more than 14 were deportable, and "only one of the 448 was a radical." The fact that foreign radicals are not at the bottom of the strikes could not be more clearly demonstrated, but, according to the title of an article in *The New Republic* for Mar 27, 1935, the "foreign agitator" is "An Old American Institution." This article, written by Sylvia Kopald Selekmán, traces the history of this cry from the earliest days of the American labor movement to the present time, making detailed footnote references to authentic sources. She concludes:

The employers . . . in our present-day America, where mass immigration has ended, will apparently be no more stumped than were those of 1825 in an America where mass immigration had hardly begun. But from that fact we take heart, too. For if the foreign agitator proves too valuable a weapon for the standpatters of mature American industry to relinquish in their defense of "American tradition," it is encouraging to remember that all the foreign agitators whom employers could raise in dawning and developing American industry did not assure their final victory over such "revolutionary, un-American" demands as the 10-hour day, the 8-hour day, factory legislation, better wages, and free public schools . . .

Equally pertinent in this connection is the statement of the Commissioner of Immigration that there are not 6,000,000 aliens in the country, but only 4,992,000 of whom fully 1,500,000 have taken out first papers or as minor children will become citizens on the naturalization of their parents. Moreover, it is estimated that not more than 100,000 are in the country illegally and subject to deportation if detected. And finally, the oft repeated allegation that deserting alien seamen swell the ranks of those illegally in the country at the rate of a quarter of a million a year, is dissolved by the Commissioner's statement that during the last four years the average number of such desertions per year has been 1580.

Deportations. Turning now to the official figures on deportations, it is discovered that whereas 17 individuals classified under the heading "anarchists and kindred classes" were deported during 1935, there were 2824 deported and listed under the rubric "entered without proper visa." The total

number of deportees fell from 19,865 in 1933, the peak year since 1930, to 8,319, the low point for the same period. In connection with the remarks above about the movement of Mexicans out of the border States, it is interesting to note that most of the deportees went to Mexico, more than twice the number sent back to all of Europe. (See Table IV.)

TABLE IV—ALIENS DEPORTED FROM THE UNITED STATES, YEARS ENDED JUNE 30, 1930 TO 1935, BY PRINCIPAL CAUSES, COUNTRIES, RACES, AND SEX, AS SPECIFIED

Causes, countries, races, and sex	Year ended June 30— 1933	1934	1935
Number deported	19,865	8,879	8,319
Causes for deportation.			
Criminals	1,770	1,569	1,632
Violation of narcotic laws	167	122	111
Anarchists and kindred classes	74	20	17
Immoral classes	785	383	413
Mental or physical defects	1,056	662	510
Had been debarred or deported	1,010	359	933
Remained longer than permitted	3,148	986	786
Entered without proper visa	9,099	3,611	2,824
Likely to become public charges	166	98	33
Unable to read (over 16 years of age)	1,393	539	416
Under Chinese exclusion act	249	101	77
Miscellaneous causes	948	429	567
Countries to which deported.			
Europe	5,904	2,418	2,007
Czechoslovakia	217	111	99
Germany	545	200	191
Great Britain	811	376	281
Greece	400	156	110
Ireland	247	117	93
Italy	1,043	529	513
Poland	300	113	71
Spain	434	96	82
Yugoslavia	315	128	77
Other Europe	1,592	592	490
China	2,642	412	169
Japan	284	95	55
Other Asia	374	123	80
Canada	2,216	1,577	1,554
Mexico	7,750	3,883	4,078
West Indies	283	169	160
Central America	101	64	43
South America	186	86	93
Other countries	125	52	80
Race or people:			
Chinese	2,573	405	167
English	1,078	602	575
French	554	481	502
German	806	354	305
Greek	424	175	117
Hebrew	138	114	96
Irish	699	391	337
Italian	1,145	583	554
Mexican	7,772	3,860	4,052
Polish	326	119	74
Portuguese	273	71	98
Scandinavian	474	186	167
Scotch	549	272	220
Slovak	176	104	79
Spanish	502	135	120
Spanish American	180	88	86
All other	2,196	939	770
Sex { Male	17,691	7,921	7,501
{ Female	2,174	958	818

Foreign Countries. Among the more significant measures for the control of immigration taken by foreign countries during 1934, were the following: *Austria* prohibited naturalization of aliens to protect the national labor market; *Belgium* put foreign workers on a quota basis, either by the country as a whole, particular occupations, or areas; *Brasil*, by constitutional provision, established a quota of 2 per cent of the number of persons of each nationality who have settled in the country during the last 50 years as the maximum yearly increase allowable, and forbade concentration of nationalities in any part of the nation; *France* began to refuse work permits to new alien arrivals, to scrutinize applications for renewals closely, and forbade the employment of aliens on public works; *Mexico* prohibited the entry of

aliens desiring to engage in remunerative activity; and *Rumania* set up the requirement that 80 per cent of the staff of every business house must be Rumanian nationals, and 50 per cent of the directors and members of boards.

IMPORTS. See articles on various countries; and especially articles AGRICULTURE; CORN; IRON AND STEEL, ETC.

INCINERATION. See GARBAGE AND REFUSE DISPOSAL.

INCOME. See PUBLIC FINANCE; STATISTICS; TAXATION.

INDIA. A dependency of the British Empire, consisting of British India, or the territory subject to British law and directly administered by British officials, and the Indian States, ruled by native princes but subject to the control of the British Parliament. Capital, New Delhi. Summer seat of the government (April to October), Simla.

Area and Population. India has an area of 1,819,000 square miles (British Provinces, 1,107,968; Indian States, 711,032) and a population estimated on Jan. 1, 1934, at 363,100,000. At the 1931 census, the population totaled 352,986,876 (British Provinces, 271,749,312; Indian States, 81,237,564). For the area and population of the various Provinces, States, and Agencies in 1931, see 1933 New INTERNATIONAL YEAR BOOK, p. 356. Registered living births in the British Provinces in 1933 numbered 9,678,876; deaths, 6,096,782. Populations of the chief cities in 1931 were: Calcutta, with suburbs and Howrah, 1,419,312; Bombay, 1,147,851; Madras, 647,228; Delhi, 447,422; Lahore, 429,747; Rangoon, 400,415; Hyderabad, 377,000; Ahmedabad, 310,000; Bangalore, 306,365; Lucknow, 276,659; Amritsar, 264,840; Karachi, 260,639; Cawnpore, 243,755; Agra, 229,764; Nagpur, 215,003; Benares, 205,315.

The division of the population by religious faiths in 1931 was: Hindus, 239,195,140; Moslems, 77,677,545; Buddhists, 12,786,806; tribal religions, 8,280,347; Christians, 6,296,763; Sikhs, 4,335,771; Jains, 1,252,105; Jews, 24,141.

Education. The population in 1931 was about 90 per cent illiterate, the census showing 28,138,856 persons able to read and write. In British India in 1932-33 there were 222,566 "recognized" schools, with 12,192,137 pupils, and 34,781 "unrecognized" schools, with 661,395 pupils. These included 199,706 primary schools, with 9,531,970 pupils; 13,761 secondary schools, with 2,297,067 pupils; 252 colleges of arts and sciences, with 75,329 students; and 16 universities, with 10,041 students. There were also 6831 special institutions, with 277,730 students.

Production. About 110,000,000 persons were engaged in agriculture, forestry, and stock raising in 1931. The area under cultivation in 1931-32 was 298,641,000 acres. Provisional yields of the chief crops in 1934-35, with 1933-34 figures in parentheses, were (in 1000 metric tons): Wheat, 9508 (9591); rice, 45,508 (47,084); cane sugar, 3100 (2970); linseed, 383 (412.5); rape and mustard, 967.3 (1,062.8); sesamum, 410.5 (549.7); ground-nuts, 1899 (3,383.4); cotton, 872.2 (919.5); jute, 1445 (1,453.7). Exports of crude rubber in 1934 totaled 12,000 metric tons; production of tobacco (1933-34), 630,000 metric tons; coffee exports (1932-33), 14,700 metric tons; barley production (1933-34), 2,388,700 metric tons. The 1931-32 livestock census showed 159,573,000 cattle, 41,928,000 buffaloes, 43,481,000 sheep, 49,704,000 goats, 4,292,000 horses, mules, and asses, and 947,000 camels.

Mineral and metallurgical production was (in

1000 metric tons): Coal (British Provinces only), 20,431 in 1934; cement, 749 in 1934; salt, 1740 in 1933; coke, 2084 in 1933; petroleum, 1292 in 1934; manganese ore, 221.8 in 1933; iron ore, 1248 in 1933; pig iron and ferro-alloys, 1083 in 1933; steel ingots and castings, 813; copper, 10.9 in 1933; lead, 90.2 in 1934; zinc, 56.7 in 1934; tin, 3.4 in 1934; bauxite, 1.1 in 1933; nickel, 1.2 in 1934. Gold production in 1934 was 9950 kilograms; silver, 180,000 kilograms.

One of the seven leading industrial countries of the world, India produces important quantities of cotton textiles, jute, iron, and steel, and sugar. For the year ended Aug. 31, 1934, there were 352 cotton mills, with 9,613,000 spindles and 194,888 looms, employing an average of 385,000 employees daily. For the same year cotton consumption was 1,292,512,000 lb. and the production of piece goods was 2,945,051,000 yd. There were 101 jute mills, with 50,195 looms operating on Jan. 1, 1935; production during 1934 was 839,094 long tons. Other industrial establishments in 1932 included 2050 cotton ginning and pressing mills, 1498 rice mills, 978 tea factories, 239 vegetable oil mills, 166 sugar factories, 158 saw mills, 343 printing and bookbinding establishments.

Foreign Trade. Sea-borne imports of merchandise (excluding government stores) during the fiscal year ended Mar. 31, 1935, totaled £99,189,000 (1,322,520,000 rupees), compared with £86,518,000 (1,153,573,000 rupees) in 1933-34. Merchandise exports, including reexports, were £116,090,000 (1,547,866,000 rupees) in 1934-35 and £112,300,000 (1,497,348,000 rupees) in 1933-34. In 1934-35 the United Kingdom supplied 40.6 per cent of the total merchandise imports; Japan, 15.7; Germany, 7.7; and the United States, 6.3 per cent. Of the exports, the United Kingdom took 31.4 per cent; Japan, 16; United States, 8.3; and Germany, 4.6 per cent. Values of leading 1934-35 imports were (in £1000): Cotton goods, 13,994; machinery, 9478; mineral oils, 4554; iron and steel, 4002; raw cotton, 3963; instruments, 3545. Values of the main exports were (in £1000): Raw cotton, 25,872; jute manufactures, 16,101; tea, 15,098; raw jute, 8153; oil seeds, 7906; rice, 7776; metals and ores, 4435; leather, 4109.

Imports in 1935 were valued at 1,359,000,000 rupees; exports, 1,607,500,000 rupees (preliminary). United States statistics for 1935 showed imports from British India of \$64,403,655 (\$55,082,367 in 1934) and exports to India of \$31,452,073 (\$27,441,904 in 1934).

Finance. Budget returns for the fiscal year ended Mar. 31, 1934, showed a surplus of 27,200,000 rupees and the revised estimates for 1934-35 showed an anticipated surplus of 32,700,000 rupees. The budget for 1935-36 estimated receipts at 1,249,000,000 rupees and expenditures at 1,234,000,000 rupees.

The public debt of the Government of British India, including the debt incurred on behalf of the provincial governments, amounted to 12,239,700,000 rupees on Mar. 31, 1934. The internal debt was 7,123,700,000 rupees; external, 5,116,000,000 rupees. The rupee, with a par value of \$0.6180 in 1935, exchanged at an average of \$0.2635 in 1932, \$0.3182 in 1933, and \$0.3788 in 1934.

Communications. With 42,953 miles of line, the Indian railways during the year ended Mar. 31, 1934, carried 489,613,000 passengers and 76,513,000 tons of freight, earning gross receipts of 995,800,000 rupees. Highways in British India and the Punjab extended about 225,280 miles. British, French, and Dutch air lines connect India with

Europe and with the other countries of the Far East. The net tonnage of vessels entering Indian ports in the overseas trade with cargo totaled 7,939,000 for the year ended Mar. 31, 1935 (7,354,000 in 1933-34).

Government. Direction and control of the civil and military government of British India were vested in the Governor-General in Council, or government of India. The Governor-General, or Viceroy, is appointed by the British Government, usually for five years. The Legislature in 1935 consisted of the Viceroy and two chambers—the Council of State of 60 members (33 elected and 27 nominated) and the Legislative Assembly of 146 members (105 elected and 41 nominated). For the constitutional reforms for India approved by the British Parliament in June, 1935, see *History*. Viceroy in 1935, the Earl of Willingdon. The appointment of Lord Linlithgow to succeed the Earl of Willingdon upon the expiration of the latter's term in April, 1936, was announced by the King in August, 1935. The six appointed members of the Viceroy's council served as a cabinet.

HISTORY

India Wins Parliamentary Rule. After investigations, round-table conferences, and parliamentary hearings extending over a period of eight years, the momentous Government of India Act passed the British Parliament and received the royal assent on Aug. 2, 1935. It extended parliamentary government to one-fifth of the human family, and formally embodied the conviction of the British Government that complete autonomy and Dominion status was the eventual goal of governmental evolution in India. However the powers of self-government extended to India immediately under the Act were hedged about with formidable safeguards and precautions which left final power in the hands of the British Viceroy.

The text of the bill was published on January 24 coincident with its introduction in Parliament. The bill followed with but slight modification the recommendations of the Parliamentary Joint Select Committee submitted Nov. 21, 1934, after hearings extending over 18 months (see 1934 YEAR BOOK, pp. 307-308 for these recommendations). The debate on the bill was inaugurated with the declaration of Sir Samuel Hoare, Secretary of State for India, that "the natural issue of India's progress is the attainment of Dominion status." The measure was bitterly fought by a strong Conservative diehard group under Winston Churchill which opposed any concession to the Indian agitation for self-government. The Labor minority in Parliament attacked the measure on the ground that it did not go far enough in the grant of partial autonomy. In India opinion was similarly divided, with the Indian Princes asking modifications of the bill to safeguard their sovereignty against invasion by the new Central Government and with the All-India National Congress and other groups opposing it as totally inadequate. In February the Indian Legislative Assembly voted 74 to 58 that the scheme for Provincial Governments outlined in the bill was "most unsatisfactory and disappointing." The provisions for establishment of a Central Government, or All-India Federation, were condemned as "fundamentally bad and totally unacceptable to the people of British India."

With minor concessions to the critics of the bill, the measure passed its final reading in the House of Commons on June 5. The House of Lords introduced further amendments, the most important

of which provided for direct instead of indirect election of the upper chamber of the new Federal Parliament. Four days after the amended bill received the royal assent on August 2, the British Government announced the appointment of the Marquess of Linlithgow as Viceroy of India, to succeed the Earl of Willingdon in April, 1936. The new Viceroy, who had been chairman of the Parliamentary Joint Committee which drafted the India Bill, was selected primarily for the task of inaugurating and administering the new parliamentary system. He was generally considered an ideal choice for the position.

Passage of the India Bill was followed by active preparations to put it into operation some time in 1936 or 1937. As the bill provided for the separation of India and Burma (q.v.), an agreement regulating trade, immigration, and other relations between the two dependencies had to be reached. Such an agreement was published in a White Paper on August 29. A commission was established to lay plans for a new Government of India Secretariat and Sir Otto Niemeyer of the Bank of England was appointed to study and make recommendations for solution of the problem of allocating financial resources among the Federal and the new Provincial governments. Another committee named was the Indian Delimitation Committee, charged with working out in detail and applying the electoral principles incorporated in the India Bill. At the end of 1935 these studies were for the most part well under way.

The Legislative Assembly. While preparations for putting the new Constitution of India into effect were under way, developments in the Legislative Assembly at Delhi indicated the developing force of the Nationalist movement and reflected increasing unrest under the curbs imposed by the British raj. Decisions of this assembly were not binding upon the Viceroy and his cabinet. Nevertheless as the most representative body in British India, its action was considered indicative of Indian sentiment on political issues. The session of the Legislative Assembly which opened at Delhi on Jan. 21, 1935, had special significance because the All-India Congress, or Nationalist party, was represented for the first time in a decade. Abandoning their boycott of the government for the elections of November, 1934, the Congress party candidates won 60 out of 145 seats and with the aid of 16 Moslem independents dominated the Legislature.

In addition to attacking the new Constitution, the Opposition defeated the government bloc in the Assembly on a number of other issues. On January 30 it carried by a vote of 66 to 58 a motion attacking the Indo-British Trade Agreement of Jan. 9, 1935, as "unfair to India" and urging the government to cancel it. In February and March it voiced its disapproval of the government by cutting to one rupee the army and Railway Board appropriations in the Central budget. It likewise voted to reduce the salt tax and other imposts. The Viceroy, however, used his veto powers to disapprove the Assembly's amendments and the bills were put into force as originally submitted by the government.

The Opposition majority administered a new series of rebukes to the government when the Legislative Assembly reconvened at Simla on September 2. It defeated, 71 to 61, a bill to extend the Criminal Law (Amendment) Act of 1932 empowering the government to crush terrorism and control the press. The measure was certified by the

Viceroy over the majority's protest. The Opposition also censured the government for the alleged bombing of women and children during operations against rebellious tribesmen on the North-West Frontier and voted, fruitlessly, to reject as inequitable the proposed financial settlement between India and Burma.

Riots and Rebellions. British defenders of the extensive powers reserved to the Viceroy under the new India Act pointed to the numerous disorders in British India during 1935 as confirming the need for a strong hand at the helm. An outbreak among the unruly Upper Mohmand tribesmen along the Afghan frontier in September was suppressed after some 30,000 British Indian troops had been sent into the region. A number of British officers were killed in the fighting and casualties among their troops totaled more than 100. Peace was restored in October, after the tribal chiefs had made their submission to Sir Ralph Griffith, Governor of the Frontier Province.

The other disorders were mainly of religious origin. On March 19 a Moslem mob in Karachi got out of hand and threatened to attack two platoons of the Royal Sussex Regiment. The soldiers fired 47 shots into the advancing throng, killing 47 persons. Fourteen were killed in a Hindu-Moslem riot at Firozabad in the United Provinces on April 14, and on June 5 more than 40 were wounded during a clash between police and Moslems in Calcutta. A Sikh-Moslem religious clash in Lahore led to disorders on July 20; a Scottish regiment fired upon rioters, killing 10. More than 1200 others were arrested. New disorders, with further deaths, occurred in Lahore in August. In the same month fighting between Moslems and Hindus in Secunderabad, State of Hyderabad, cost additional lives and caused scores of arrests. Anti-tax demonstrations caused minor disorders at several other points.

Bengal, long the seat of Indian terrorism against British officials, remained quiet. An official report revealed that 80 terrorists were confined in jails, 1468 in concentration camps, 229 in the Andaman Islands, and 966 in their homes or native villages. The Bengal Public Security Bill under which these measures were taken were extended for three years on August 26. A two-year trial of terrorists ended at Calcutta on May 1 when 31 Hindus were convicted of conspiring against the government. To the toll of these man-made disasters was added the heavy loss of life and property caused by the great earthquake of May 31 which ruined Quetta in Baluchistan and many villages in that vicinity (see EARTHQUAKES).

Financial Problems. With the inauguration of India's new Central Bank on April 1, the question was raised once more as to the effect upon India's financial structure and internal economy of the heavy outflow of gold and silver caused by the higher prices of these metals resulting from the depreciation of currencies the world over. However the outflow of both gold and silver showed a tendency to decline during 1935 and official reports indicated that vast stores of both metals remained in private Indian hoards. From 1900 through 1931 gold imported into India totaled 89,200,000 ounces (\$3,122,000,000), while exports from April, 1931, through March, 1935, were but 29,300,000 fine ounces (\$1,025,000,000). The gold holdings of the Central Government remained constant at 415,000,000 rupees during the period 1931-35, while its silver holdings declined from 1,230,000,000 rupees on

Dec. 31, 1931, to 572,000,000 rupees on Dec. 31, 1935.

Consult H. B. Lees-Smith, "Self-Rule for India," *Current History*, October, 1935; T. A. Bisson, "A New Constitution for India," *Foreign Policy Reports*, July 17, 1935.

INDIA, PORTUGUESE. The Portuguese possessions in India, comprising Goa, Daman, and Diu. Total area, 1637 sq. miles; total population (1934), 579,969. Capital, Panjim (or New Goa). Coconuts, spices, caju-nuts, salt, fish, and manganese were the main exports. Trade was largely transit. In 1933, imports were valued at Rs15,211,583; exports, Rs2,376,159 (rupee averaged \$0.2489 for 1933). A decree of May 9, 1935, provided that future fiscal years should coincide with the calendar year and approved the budget expenditure of 53,083,787 paper escudos for the 18 months ending Dec. 31, 1936 (escudo equaled \$0.0449 on June 13, 1935). Governor-General, General Graveiro Lopes.

INDIANA. Population. On Apr. 1, 1930 (Fifteenth Census), 3,238,503; on July 1, 1934, by latest Federal estimate, 3,304,000; 1920 (Census), 2,930,390. Indianapolis, the capital, had (1930) 364,161 inhabitants; Fort Wayne, 114,946; Evansville, 102,249; South Bend, 104,193; Gary, 100,426.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu.	Value
Corn	1935	4,038,000	153,444,000	\$76,722,000
	1934	3,883,000	96,298,000	75,112,000
Hay (tame) . . .	1935	1,752,000	2,463,000 ^a	17,241,000
	1934	1,871,000	1,804,000 ^a	24,534,000
Wheat	1935	1,846,000	28,618,000	21,750,000
	1934	1,808,000	32,152,000	27,650,000
Oats	1935	1,485,000	38,610,000	9,652,000
	1934	1,350,000	18,225,000	7,837,000
Potatoes	1935	66,000	5,280,000	3,432,000
	1934	62,000	6,200,000	3,720,000
Tobacco	1935	8,200	6,590,000 ^b	926,000
	1934	7,900	6,438,000 ^b	904,000
Soy beans	1935	347,000	5,899,000	4,070,000
	1934	160,000	2,560,000	2,458,000

^a Tons. ^b Pounds.

Mineral Production. The yearly production of coal again increased moderately, to some 15,440,000 net tons (1935), from 14,793,643 (1934). Using the equivalent of about one-fourth of the yearly output of coal, the coke ovens produced 2,613,437 net tons of coke in 1934, as against 2,089,100 for 1933; by value, \$16,957,287 as against \$12,031,285. Of this coke, 2,136,283 tons, or over four-fifths, went into blast furnaces. These furnaces extracted from iron ore extraneous to the State the quantity of 1,463,350 gross tons of pig iron (1934), as against 1,183,405 (1933). The furnaces' shipments of pig iron for 1934 fell slightly short of the year's production, attaining 1,545,011 tons, but materially exceeded the 1,296,518 tons shipped in 1933; the value of yearly shipments rose to \$27,977,992 (1934) from \$19,989,998 (1933).

The limestone quarries in the State continued to produce more than three-fourths of the domestic superior limestone for building purposes; but their production declined sharply to 387,000 short tons (1934), from 502,400 (1933), and to the value of \$2,779,182 from \$4,898,773, for lack of activity in the type of building that used such stone. The production of petroleum rose to some 810,000 barrels (1934) from 737,000 (1933), in accord with the completion of new wells, largely in Vanderburgh and Gibson counties.

Education. For the academic year 1934-35, the number of inhabitants of school age was stated as 872,842. Those actually enrolled as pupils in the

public schools totaled 694,428. Of these enrollments, 520,581 were in common schools or elementary grades; the remaining 173,847 were in high schools. The total of all expenditures of the year for public-school education in the State attained \$53,644,054; this total exceeded that for the previous year by some 3 per cent. The salaries of teachers averaged, for the year, \$1089.62, a sum about \$9 in excess of the corresponding average for the year previous.

The Legislature provided in 1935, with the aid of State revenue, that a minimum of \$400 be set for teachers' yearly pay. A change in curriculum, the *Journal* of the National Education Association reported, required high-school courses in safety. Federal aid was given to the erection of some 96 buildings.

Charities and Corrections. The Department of Public Welfare, as constituted under the general administrative reorganizing act of 1933, functioned in 1935 as the central administrative authority over institutions containing persons in the State's care.

The State maintained, in 1935, the following 20 charitable and correctional institutions: for mental disorders, State Hospitals at Indianapolis, Logansport, Richmond, Evansville, and North Madison; for the feeble-minded, the Fort Wayne State School, at Fort Wayne, and the Muskatatuck Colony, at Butlerville; a Village for Epileptics, at New-castle; Soldiers' Home, at Lafayette; Soldiers' and Sailors' Children's Home, Knightstown; State Sanatorium (for cases of tuberculosis), Rockville; Indiana University Hospitals, Indianapolis; State School for the Deaf, Indianapolis; School for the Blind, Indianapolis; State Prison, Michigan City; Reformatory, Pendleton; State Farm for Misdemeanants, Greencastle; Women's Prison, Indianapolis; Indiana Girls' School, Indianapolis; Indiana Boys' School, Plainfield.

Legislation. The regular session of the Legislature was occupied with measures for increasing revenues, lowering the direct taxes, controlling the traffic in liquor, and improving social conditions. An act was passed terminating the right of individuals to bring civil suits on grounds of breach of promise to marry and of alienation of affections. The business of selling household appliances was prohibited to public-utility companies. The State's ratification was given to the proposed amendment to the United States Constitution giving Congress power with regard to the labor of the young.

Political and Other Events. The monthly contributions of the FERA to the support of the State's destitute unemployed ceased with September; it was then held that the supply of employment, either of the normal sort or of the kind provided by the Federal work-making agencies, had reduced the number of the idle sufficiently to obviate the need of direct Federal contribution to their maintenance. There had been spent for their support in 1934 somewhat over \$31,000,000, of which the FERA had furnished \$20,787,263.

There occurred in Terre Haute, July 22-23, a general strike, supported by the local organizations of the AFL, which stopped transportation, the movement of goods, the retailing of fuel for automobiles, and the serving of meals at many public eating-places. The strike was designed as a protest against the alleged importation of a body of 58 guards by the Columbian Enameling and Stamping Company, the offices of which had lately been invaded and wrecked by persons in sympathy

with striking employees of that company. Governor McNutt put 2000 National Guardsmen in the city at the outset of the general strike, and no serious violence was reported.

Indianapolis undertook to buy the property and business of the Citizens' Gas Company, which it intended to operate as a municipal plant. It sold for this purpose \$8,000,000 of bonds secured by a pledge of the property's income.

Officers. The chief officers of the State, serving in 1935, were: Governor, Paul V. McNutt; Lieutenant-Governor, M. Clifford Townsend; Secretary of State, August G. Mueller; Auditor, Lawrence F. Sullivan; Treasurer, Peter F. Hein; Attorney-General, Philip Lutz, Jr.; Superintendent of Public Instruction, Floyd I. McMurray.

Judiciary. Supreme Court: Judges, James P. Hughes, Michael Fansler, George L. Tremain, Curtis W. Roll, Walter E. Treanor.

INDIANA UNIVERSITY. A coeducational State institution of higher learning in Bloomington, Ind., founded in 1820. For the first semester of the academic year 1935-36 the registration aggregated 5220 students (3438 men and 1782 women). The faculty had 370 members. The endowment funds amounted to \$2,269,662, and the total income for the year, from State and private sources, was \$2,589,697. The library contained 256,179 volumes. President, William Lowe Bryan, Ph.D., LL.D., L.H.D.

INDIANS. In the Indian Reorganization (or modified Wheeler-Howard) Act, as outlined in THE NEW INTERNATIONAL YEAR BOOK OF 1934, provision was made that each tribe must decide at a special election whether it wanted to accept the benefits of the Act or reject them. Beginning with August, 1934, and extending to June 17, 1935, according to the annual report of John Collier, Commissioner, to the Secretary of the Interior, 263 elections resulted in the decision by 73 tribes, with a population of 63,467 persons, to exclude themselves from the benefits and protection of the Act, and by 172 tribes, with a population of 132,426 persons, to accept the Act.

Where the Act was rejected it was due in the main to energetic campaigns of misrepresentation carried on by special interests which feared loss of advantages through the new law. All the 73 reservations voting against acceptance of the act were small, except the largest reservation, that of the Navajos. Through the aid of false propaganda, exclusion of the Navajo reservation was brought about by a narrow margin of votes—7992 against and 7608 for acceptance.

Indians played a prominent part in emergency conservation work, adding many millions of dollars to the value of land, water, and forests in the last two years through the construction and development of wells, springs, stock-water dams, roads and truck trails, fences, and telephone lines. Invaluable benefits have been derived from the improvement of 20,000,000 acres of range. Likewise, Public Works funds granted for new Indian school buildings, hospitals and sanatoria are a clear gain to the Indians and to many nearby white communities. Despite this the need for such structures is not yet half filled nor is the Indian irrigation programme, financed from emergency funds, more than one-third completed.

A policy of greater utilization of Indians in the Indian Service was begun in the fiscal year. Of a total of 5463 regular classified positions in the field service, 2037 are filled by Indians. Exact figures as to the number of Indians employed on

Public Works and Emergency Conservation Work projects are not available. Through the Employment Division, 11,568 Indians were placed, a gain of 21.7 per cent over the previous year.

Indian livestock industry was given a real impetus through the allocation of \$800,000 by the Agricultural Adjustment Administration for the purchase of purebred cattle from distressed breeders in the drought areas. Arrangements also were made with the Federal Surplus Relief Corporation whereby cattle were turned over to the Indians to establish foundation herds. Also, the number of Indians owning dairy cattle increased throughout the year by 44 per cent, and the number of such animals owned increased 57 per cent.

The income of the Osage Indians of Oklahoma from their oil and gas leases was almost \$5,000,000 during the year, bringing the total received by them from that source to more than \$252,700,000. Oil is also being produced and marketed on the Navajo reservation in New Mexico and on the Blackfeet reservation in Montana.

A total of \$10,000,000 was allotted for the Indian emergency conservation work, \$7,500,000 under the act of Mar. 31, 1933, and \$2,500,000 under the new act. Some 27,000 Indian enrollees have been employed since work began until the end of the last fiscal year. Indians were given preference in supervisory jobs as soon as their training warranted appointment.

The year saw the renewal of activities on several large Indian timber sales, which had been dormant for several years. There were 28 active timber sales on Indian reservations, the volume of timber cut totaling 223,000,000 board feet.

Road construction and improvement of Indian reservations was continued with the \$2,000,000 provided in the Emergency Appropriation Act of June 19, 1934. With this fund, 1120 mi. of road were constructed or reconstructed, 348 mi. of road were surfaced, 3755 mi. of road were maintained, 227 mi. of school roads were constructed or improved, 196 bridges were built and 173 bridges repaired.

Irrigation activities included maintenance and operation on 122 projects in the 11 western States, and domestic- and stock-water development in Arizona and New Mexico. Surveys show that the ultimate irrigation development on the reservations is about 1,160,000 acres, of which 730,000 acres are now provided with irrigation facilities. The estimated cost of completing the various projects to serve the entire 1,160,000 acres adequately is \$60,000,000. Plans have been formulated for completing this work over a 10-year period.

Total Public Works funds available for the year were \$4,581,043, the total expenditures from this amount being \$3,600,000 which left a balance of about \$981,043 available for the fiscal year 1936.

INDIUM. See CHEMISTRY, INDUSTRIAL AND APPLIED.

INDO-CHINA, or FARTHER INDIA. The southeastern peninsula of Asia comprising the following: BURMA, FEDERATED MALAY STATES, FRENCH INDO-CHINA, SIAM, STRAITS SETTLEMENTS, and UNFEDERATED MALAY STATES. See the articles on the above.

INFRARED PHOTOGRAPHY. See PHOTOGRAPHY.

ININI, TERRITORY OF. See FRENCH GUIANA AND ININI.

INNER MONGOLIA. See MONGOLIA.

INSECTS. See ENTOMOLOGY, ECONOMIC; ZOOLOGY.

INSURANCE. Insurance interests have no legitimate cause for complaint with their experience during 1935; for the companies generally, and particularly the fire and surety writing offices, profited substantially in both their underwriting and their financial departments. No division of the business, it is true, made appreciable gains in premium income, counting itself fortunate if the returns in such connection equaled those of the preceding year. All, however, advanced materially, through appreciation in the market value of securities carried in portfolios; the average gains in such connection—bonds and stocks included—being approximately 20 per cent over the quotations at the close of 1934. By virtue of the combined favorable underwriting and financial results, companies almost without exception added substantially to net surplus accounts; a number sharing the prosperity with stockholders through the declaration of extra dividends.

While little inimical legislation peculiarly affecting insurance interests was enacted in any of the States, extensive business development campaigns, which otherwise would have been embarked upon, were retarded through the passage of various laws of general application by Congress, the effect of which underwriters desired to study before committing themselves to broad expansion moves.

Little new capital entered the underwriting field during the past 12 months; nor was there any real demand for it, the institutions already operating being equipped to furnish all the liability required by property owners.

That insurance, by and large, is upon a more stable basis to-day than was the case in 1934, not to mention the three immediately preceding years, is sufficiently attested by the absence of important company retirements, voluntary or otherwise. Such reinsurances or liquidations as did take place, were of small concerns. A further evidence of increased financial strength by the carriers was the repayment by several of loans previously had from the Reconstruction Finance Corporation.

The past year, in common with that of the preceding 12 months, witnessed the appointment of an unusually large number of new state insurance commissioners, few of whom had any previous knowledge of the business. Feeling between the governing officials of the eastern and western States as to matters of general administration policy developed and proved the occasion for a lively exchange of views between the two elements at the semi-annual gathering of the National Convention of Insurance Commissioners in New York City in December.

Holding that certain conditions peculiar to their territory obtained and required special consideration, commissioners of a number of commonwealths of the west formed a separate organization, though continuing membership in the national body as well. One of the contentions between the two interests is that of company examinations; an element declaring that the investigation of companies wherever domiciled be undertaken by a committee of the National Convention, while others would have none of it, holding instead that each department examine its home institutions.

So far as managing underwriters were concerned, their position continued to be that examinations, by whomever conducted, should be at the expense of the State departments and not be a further charge upon the institutions, whose annual premium and other tax payments to the States far exceeds the cost of departmental operations.

Appreciating that the insurance laws of their respective States were inadequate in many respects to meet existing underwriting conditions, statutes in a number of the commonwealths were amended, while in several, complete code revisions were either effected or initiated.

As was true in 1934, the safe investment of funds continued to be the major problem of insurance companies during the year. Particularly did it apply to life offices, which limited by law to the type of securities they may purchase, and predicating their premium rates upon an assumed earned rate of interest, were hard pressed in their handling of funds. Government bonds had been bought to a large extent, as had State and municipal obligations, but even so, the market was a restricted one, and extreme care had to be exercised in making long-term commitments. In the farm loan mortgage field, formerly an attractive investment avenue for life companies, competition of the federal government tended to strictly limit the number of desirable offerings. While farm loans are still being made, the trend of the life offices generally is toward loaning upon urban properties, carefully selected and conservatively appraised.

Fire, casualty, and marine writing companies, being free from the rigid legal restriction applied to life institutions, were able to invest in diversified forms of security, the gains from which were appreciable.

Casualty Insurance. Easily the outstanding happening in the field of casualty insurance during 1935 was the creation of a guarantee fund by companies operating in New York for the payment of compensation insurance claims in the event of default by any licensed carrier. The fund, or funds rather (for separate contributions are made by the stock and the mutual companies), will be administered by State officials, independent of the underwriters. This move was the outgrowth of the dissatisfaction caused by the dismal failure of several companies in the preceding two years, leaving in their train a host of unfortunates, many of whom were dependent upon settlement of their just claims in order to pay living expenses.

Yet another important action taken by the compensation writing companies was the formation of a pooling arrangement for insuring the less desirable types of risks, member offices in the associated effort each obligating itself to become liable for a percentage of every risk taken by the pool. A like arrangement was adopted for New Jersey and several other States, and the expectation is the plan will eventually be established in every commonwealth where undesirable individual risks exist to any material extent. In thus providing sound and complete indemnity for many lines that would be unable to get protection otherwise, the need for creating State funds was obviated.

Though the loss experience had under workmen's compensation policies is still excessive, some improvement has resulted, and hope is expressed that with the gain in industrial activity in many sections of the land, there will be additional premium income on the one hand and a reduction in the tendency to malingering on the other.

Adjustment of claims by arbitration, notably in connection with automobile public liability and property damage accidents, continues in favor; consideration of cases through such method expediting settlements and resulting in general satisfaction to all parties interested. Impetus to the arbitration idea was given through extension of the activities of the American Arbitration Association,

a body composed of attorneys, casualty underwriters, and laymen, and of which G. S. Van Schaick, former insurance superintendent of New York, is chairman.

Little or no improvement in automobile public liability losses was had through the year; in fact, it may be said losses were more severe than in 1934, a result chargeable to the growing number of cars on the road; their greater speed possibilities, and laxity in the enforcement of safety regulations by State and municipal authorities. So heavy has the toll of life become, that a nationwide safety five-year campaign has been inaugurated under central direction. The movement has the endorsement of the President, who in a special message urged its support by every one interested in human well-being.

A number of States have under consideration enactment of compulsory automobile insurance laws, New York and Virginia among others. Students of the problem, however, assert such laws will not result in reducing accident frequency, but will increase the number of damage actions. In Massachusetts, where a compulsory statute has been in force for five years, claims for alleged road accident injuries multiplied many fold, so much so that repeal of the law has been seriously proposed from time to time.

In the minor divisions of casualty insurance: personal, accident, and health, burglary, plate glass, and steam boiler, records on the whole were satisfactory. In personal accident and health insurance, improvement resulted through the continued use of standard clause policies, closer underwriting practices, and a determined curtailment of large policy writings. Extended general experience revealed that contracts granting indemnities in excess of \$50 per week were unprofitable. There was talk of forming a pooling arrangement in which companies contributing might place their excess liability. In a determined effort to popularize general accident insurance, companies and agents in different sections of the country inaugurated "accident and health insurance week," making a special drive to write the business during the period. Such success attended the effort that it will likely become an annual event. Because of the high reserves required for claims under noncancellable accident policies, practically every company that previously issued such contracts discontinued the business.

In burglary and hold-up insurance, the premium income for the year will just about equal that had in 1934, the substantial rate reductions effected on certain risk classifications and in different parts of the country, making a gain in income unlikely. The loss record, however, had not been excessive.

Fire Insurance. The outstanding feature of the fire field was the continued diminution in the number and seriousness of fires throughout the country, the monthly tabulations of the National Board, with but four exceptions, recording lower losses than those of the corresponding periods of 1934 which in turn were below those for the preceding year. The largest individual loss suffered by the companies in 1935 was caused by the hurricane that swept southeastern Florida, November 4, as a result of which fire offices paid close to \$3,000,000 under their windstorm policies. Other serious individual losses were the burning of several large whisky warehouses in Illinois. In spite of these and the several thousand other losses, however, the aggregate destruction of property by fire last year showed a commendable reduction, a condition attributed in part to the active fire preven-

tion campaigns waged through the year in the different States under the sponsorship of chambers of commerce and other business organizations acting in cooperation with insurance interests. (See FIRE PROTECTION.) Because of the continued improvement in the loss record, the National Board rescinded its previous rule regarding loss payments, permitting settlement by companies at once after proper claim adjustments were effected.

To meet the demand of business interests for broader forms of indemnity under single contracts, fire companies issued what is known as the "supplemental policy," a number of hazards, in addition to fire being assumed thereunder. Still further development along this line may be looked for, once the laws of the various States be amended to permit the assumption of multiple risks, now either expressly prohibited or unprovided for in the statutes.

Early in the year an organization of American-owned stock fire companies was formed to assume the fire risk of properties upon which funds had been advanced by the Home Owners Loan Corporation of the Federal Government. Policies issued through such medium are credited to agents handling the business, who receive their proper commission.

Other important developments in the fire field were the insistent demand of local agents in many sections for contingent commissions, in addition to the flat or the graded scale of compensation already allowed them; their contention was that they should share in the unusual prosperity enjoyed by the companies during the past two years. While conceding that losses have been unusually light both in 1934 and 1935, managing underwriters yet appreciated there might, and very likely would be, a sharp reversal of form once industrial plants resumed their normal activity. They further maintained that benefits of the reduced losses had and were being credited to assureds through the medium of rate reductions, the effect of which will be to substantially curtail company incomes in 1936; hence their unwillingness to increase expense ratios.

Agents, on the other hand, assert they suffer the loss of considerable business not alone to non-affiliating institutions but to specialty organizations conducted by their own companies. Another, though by no means a new objection of the agents, is to the continued maintenance of branch offices by some companies, holding that managed by salaried men, these branches compete unfairly with the purely commission representatives. Conferences to consider the complaint of the agents and to work out understandings have been held by managing underwriters, and others are in progress or contemplated during the ensuing year.

Life Insurance. Despite the uncertainty that obtained in life circles as to the probable influence enactment of the Federal Social Security Act and the changes in income, estate, and other tax measures enacted by the latest Congress, would have, the life companies wrote more new business last year than in 1934, the aggregates for the two periods being \$8,821,844,000 and \$8,605,432,000 respectively.

By virtue of the difficulty of safely investing their ever-growing reserve accumulations, and the reduced interest earning had from securities already carried, virtually all life companies increased rates for annuities in January, 1935, the mutual companies modifying the advance by agreeing to return as dividends to annuitants under their contracts, whatever gains might accrue from improved mortality experience, saving, in operating costs, and

additional interest earnings, if any. Though still writing immediate as well as deferred annuities, companies, with scarcely an exception, sharply curtail their acceptances of such forms, urging agents instead to develop the sale of straight protection policies.

The large percentage of life proceeds are still paid in lump sums, instead of in monthly installments, despite the manifold advantages to beneficiaries of the latter method.

Conditions in the average life policy with respect to the use of aeroplanes, have been broadened, underwriters holding the hazard of air transportation is far less to-day than formerly, and that a liberalization of previous policy restrictions in such connection is justified. Companies are making constant efforts to improve the character and intelligence of their soliciting staffs, realizing that if the confidence of prospective assureds is to be had, agents must be equipped to present propositions clearly, completely and without loss of time.

Surety Insurance. Companies granting fidelity and surety bonds, report an increase in premiums on the former line, and a slight gain in the latter. The loss experience upon both types of coverage, however, was satisfactory; enabling the earning of a fair profit. The income from contract bonds, considerably greater than that had last year, was largely the result of the public works construction programme of the Federal Government.

Salvages surety underwriters hoped to secure from the liquidation of the many banks and trust companies upon which they paid depository bond losses in the depressed years, 1930-33, have been disappointingly small. Under conditions prevailing prior to 1929, salvages in national bank failures averaged 75 per cent, and those from State bank liquidations close to 50 per cent. Upon neither type of institution has the recovery equaled even the latter figure since 1929. Depository bond indemnity, once a prolific source of premium income (as well as heavy loss) to the surety offices, passed out of the picture with the creation of the federal insurance deposit guarantee fund.

INTERNAL COMBUSTION ENGINES.

See ENGINES.

INTERNATIONAL BANKING AND FINANCE.

Although the situation in international banking and finance had reached a discouraging phase at the close of the year 1934, developments during the past 12 months have not been such as to improve conditions in any material degree. Perhaps the best that can be said of them is that they have not become definitely worse during the year 1935. Outstanding among the events of the year, may be noted the following:

(1) The abandonment of the gold standard by Belgium in the spring of 1935, and the devaluation of its currency by about 25 per cent.

(2) The referendum in Switzerland at the opening of June, 1935, in which permission was given to the existing administration of the country to use its own judgment about devaluing the Swiss franc, but such monetary and credit action as was deemed to be in the interest of the country was authorized.

(3) The adoption by Italy, at the opening of September, of policies in the raising of funds for the Ethiopian war which necessitated the release of the note gold reserve for the Bank of Italy and its obligation to employ this gold fund when, and as, needed in paying for foreign war materials. As a result of this policy, the lira fell at times to a figure fully 40 per cent below its quoted value of the preceding six months.

(4) The statement by authorized officials (secretaries of State and Treasury), in the United States, that the Washington government was ready to undertake once more the effort to negotiate a stabilization agreement to which other countries would be parties.

Many other developments of considerable local interest might be enumerated, but the major developments in the field are as set forth above. No account of the events of the year, however, would be satisfactory without calling attention to the unsuccess of all efforts to secure the repeal of the Johnson Act in the United States, and the consequent handicapping of any efforts at international financing in which the American market might have been called upon to take part.

From the time of the enactment of the Johnson Act (May, 1934), it was pretty generally recognized, both in Europe and in the United States, that complete economic recovery from the depression would never be possible without a restoration of international capital markets, and that this could not be expected, so long as the Johnson Act remained upon the statute books. The retention of the Johnson Act by the United States Treasury has thus had an international significance, which ordinarily it might not have possessed. Under its terms, however, it has not been possible to have any new foreign financing floated in the United States; and with economic conditions as they have been throughout the world, this has practically meant that no new financing of considerable size could be arranged in any quarter. Accordingly, the revival of domestic financing which occurred in American markets during the second half of 1935 and the renewal of activity even in the bonds of sundry South American countries, had no effect in bringing back the foreign bond business of the 'twenties; but, on the contrary, it remained practically dead. Foreign flotations on the New York market for the year 1935 were reported by the Federal Reserve Board as nonexistent up to the close of October. This suspension of international financing may have had some influence in preventing active and successful preparation for putting into effect the war plans of Italy in its contest with Ethiopia, and possibly of discouraging other war preparations that might have taken place. These situations, however, are necessarily conjectural and can only be offset against the actual injurious results which were experienced from the inability to continue with international financing, upon even the most modest scale, for the purpose of effecting refundings and readjustments.

With international banking and finance in the localized condition thus described, it was hardly to be expected that much progress can be made in the matter of restoring a condition of monetary or financial stabilization. The gold decisions handed down by the Supreme Court of the United States in February, 1935, were believed, by some, likely to pave the way for stabilization agreements; but apparently they had the opposite effect, by leading foreigners to believe that the reserve power of the President of the United States to devalue the dollar still further, was, potentially, an even greater danger than they had supposed it to be, since apparently he was likely to be successful in obtaining the ratification or approval of the Supreme Court for his action in so doing. Indeed, at about the time that the gold decisions were rendered, various influential, even if not official, interpreters of British monetary policy, took occasion to utter predictions that monetary stabilization was even farther away

than had been expected. During the first half of the year, the early breakdown of the so-called "gold bloc" was frequently predicted, and when this breakdown was confined entirely to the case of Belgium, the crises in Holland and in France being overcome by changes of ministry, there still remained numerous difficulties of various kinds to be smoothed out before any definite advance toward a basis of stabilization could reasonably be expected to be made.

Subsequent to various informal conferences in Washington with representatives of foreign powers, the Secretary of the Treasury visited France in the late autumn, and there had conferences with officials of the Bank of France, the outcome, however, being merely an announcement that stabilization had not been brought nearer. The devaluation in Belgium and the defection of Italy from its gold bloc relationships, were both disheartening factors; while the internal condition of affairs in France, and the apparent growth of the devaluation party in that country, likewise, operated to defer the crystallization of opinion evidently necessary to bring about the attainment of definite results. The so-called "gold decisions" of the Supreme Court, handed down in February, 1935, were, of course, effective against foreign holders of American securities just as they were against American citizens. Their effect, was to impair the credit of the nation and to support the opinion of many foreigners that the demands which the Washington government had made for the payment of war indebtedness, as well as the criticisms that had been leveled against defaulting debtors on war account, were not sincere, inasmuch as a similar policy of default, applied through different methods, had been determined upon and was now upheld, though disapprovingly, by the highest tribunal of the United States. Undoubtedly, the gold decisions had a serious influence in retarding the progress of reorganizing international banking and the settlement of international obligations.

The Johnson Act continued, despite the prevalent feeling on the part of many American public officials that it tended still further to prevent the restoration of the machinery of international finance which had already received so severe a shock. One result of the continued operation of the Johnson Act which was, however, regarded by many as a desirable phase of its operation, was found in the restriction it placed upon the acquisition by Italy of funds for use in the financing of her campaign in Ethiopia. Negotiations for the opening of credits in favor of Italy, in the United States, were sporadically undertaken in the autumn of 1935, but had no result prior to the close of the year, largely owing, it would seem, to the obstacles placed in the way of such loans by the act in question as well as by the Federal neutrality policy. The question, how far the promises of France to furnish Italy with financial support—supposed to have been made during earlier years—were actually carried out during the fore part of 1935 is a matter of controversy; but doubtless, arrangements had been made to open French credits in favor of Italy at a time when the Ethiopian adventure of the latter country had not yet attained its full development.

This inability, on the part of what remained of the international banking mechanism, to function, had a marked effect throughout the world and was particularly noticeable in the foreign trade of the United States. In former years, adverse or favorable balances in international trade had usually been carried by the opening of credits; but during 1935

such credits being unavailable, settlements continued to be made in gold or carried on open account. As the United States was by far the largest creditor country in the world, the difficulties thus engendered necessarily restricted the trade, and export sales of American commodities fell off sharply, their total being reduced by fully one-third, as compared with the preceding year. At the same time, the United States received well over a billion dollars in gold in settlement of international indebtedness which, in normal times, would have been carried by banking methods. The result of this situation was, of course, a serious disturbance of the functioning of the industrial organization at home and a further obstacle to the restoration of employment which continued on a very high level, although somewhat reduced toward the end of the year.

The work of the Bank for International Settlements was still largely of an advisory nature, designed, generally speaking, for the support of ideas rather than for the conduct of financial transactions, during the year in question. The Bank continued to undertake much the same types of operations as before and to confine its transactions to those stated in gold currencies with corresponding limitation of the area in which it could work. Its annual statement showed conditions very little changed, although with some limitation of profits. An alteration of the executive leadership of it resulted from the retirement of its former president and the appointment of a successor in the person of the former Governor of the Netherlands Bank. Hence, the Bank for International Settlements has been able to take no further forward steps in the direction of restoring the gold standard, or of introducing any stable international standard, though it has continued to perform a useful function along the same lines as in former years—those of unifying central banking opinion, maintaining friendly relations between central banks, and actually undertaking financial dealings that were calculated to smooth the current of international trade.

On the whole, the year 1935 thus continued the transition period to which its predecessor—the year 1934—emphatically belonged. The anticipated breakdown, feared in various countries, did not materialize. The transference of Belgium to a devalued standard produced a less decided break with the past than had been expected. There was no diminution in the apparent appreciation of the business man for a stable monetary unit;—indeed, the meetings of the International Chamber of Commerce, at Paris in early autumn, were largely devoted to a consideration of the ways in which the current of international banking operations might be restored upon a basis involving a stabilized standard of value. Nevertheless, the aspirations which had given rise to the Bank for International Settlements at the time of its inception, were still unrealized, and its future continued to be dependent upon prospective action on the part of the several countries.

INTERNATIONAL CHAMBER OF COMMERCE. An international federation of business organizations and business men, established in 1920 as a successor to the more loosely organized International Congress of Chambers of Commerce, which had met at intervals of two years for a considerable period before the World War. It has a membership of industrial, commercial, and financial associations, chambers of commerce, shipping and transportation organizations, as well as an associate membership of individual business companies and business men, in 48 states.

Through 1935 the organization held 8 general congresses—London, Rome, Brussels, Stockholm, Amsterdam, Washington, Vienna, and Paris—the Paris Congress, in June, 1935, being attended by more than 1000 delegates. The congresses declared the policies relating to the numerous problems of trade barriers, and the urgent need of sound commercial policies and adequate facilities for carrying on international business in the postwar period. The declarations at Rome in 1923, and the active follow-up of the recommendations there made, were influential in restoring order in the chaotic conditions which had resulted in international affairs after the brief spurt of trade, released from war restraint, in the immediate postwar years. The present programme deals primarily with the complicated array of restrictions on trade that grew up during the world-wide economic depression of the past few years, and advocacy of international monetary stabilization.

The international chamber maintained committees on coordination of production and markets (industrial ententes), international industrial statistics, commercial policy and trade barriers, monetary matters, double taxation, futures trading on commodity exchanges, commercial documentary credits, merchandise distribution and marketing, transport and communications, road and rail transportation, sea transport, and air transport, international telegraph and telephone communications, international postal service, protection of industrial property, and international commercial arbitration.

The officers in 1935 were: F. H. Fentener Van Vlissingen, industrialist of the Netherlands, president; Pierre Vasseur, secretary-general. Headquarters were at 38 Cours Albert Premier, Paris, France. Thomas J. Watson, of New York, was chairman of the American National Committee; Eliot Wadsworth, of Boston, was American vice-president. The office of the American section was at 1615 H Street, Washington, D. C.

INTERNATIONAL CONGRESS OF SCIENTIFIC AND APPLIED PHOTOGRAPHY. See PHOTOGRAPHY.

INTERNATIONALISM. The seventh biennial meeting of the World Federation of Education Associations was held in Oxford, England, Aug. 10 to 17, 1935. This occasion was notable because it was a joint meeting with the two international bodies that find their chief support in the Continent of Europe. These are the International Federation of Teachers Associations, of elementary class-room teachers, and the Federation of Secondary Teachers Association which includes the leading secondary school associations of practically all European countries. Both organizations have their headquarters in Paris, from which they issue bulletins of information, and the latter organization a well established periodical.

It has been considered desirable, by the leaders of the three organizations which are international in scope, that they should be brought together. This joint meeting was the first step to that end. A tentative agreement was drawn up between each of the two organizations and the W.F.E.A., looking toward a close affiliation, if not amalgamation. The constitution of the W.F.E.A. provides for membership of national bodies and local bodies and even of individual memberships, the goodwill memberships cultivated by Dr. Thomas; but, the constitution makes no provision for the affiliation of international bodies. Two such bodies of international character have long participated most effectively in the work of the W.F.E.A., as sections of that

organization. These are the parent and teachers or home and school sections, and the health section. A notice was given to amend the constitution of the W.F.E.A. at its next meeting, which will provide for the affiliation of international bodies practically as sections of the Federation. Such a proviso is made in the tentative agreement with the I.F.T.A., and the I.F.A.S.T., as the two continental associations are popularly known. Such an affiliation or amalgamation will not prevent these special organizations from holding their own meetings on the years intervening between the meetings of the W.F.E.A., and also on the years at which the W.F.E.A. meets at such a distance that the various European organizations cannot well be represented.

There are other international educational associations that are interested in effecting similar relationships with the W.F.E.A. One is the International Federation of Agricultural Education, which has its central office in Rome. It is also true of the Adult Education Association, which has its central office in London.

The Oxford meeting was notable for several other features, particularly for the very excellent display of the educational work of England and Wales. The exhibition was noteworthy for its excellent organization and arrangement and furnished quite an education in itself, both to the foreign visitor and to the English teacher. The addresses were of a high order but related to no common theme beyond that of international good will, and emphasis upon the part which teachers might play in furthering international amity and the cause of peace.

The United States was well represented at the conference, as it should be, as the originator and the chief proponent of the Federation. The National Education Association was represented by some 350 delegates, though, as in the past, these delegates had the privilege of casting only 50 votes in the delegate assembly.

Probably the most interesting decision made at the conference was the acceptance of the invitation of the Imperial Education Association of Japan, to meet with them as their guests in the summer of 1937.

The Commonwealth Fund Fellowships for British students have now been given annually for 10 years. They have brought nearly 300 graduate students from British universities and from the government service throughout the British Empire to study and travel in the United States. The fellowships provide for two years of study at an American university and for extensive vacation travel. Returned fellows are scattered from Scotland to New Zealand and many hold important posts in British universities, newspapers, business, and the civil service. Forty have married American girls. One returned fellow, A. A. Cooke, ran a radio feature called "An American Half-hour" for the British Broadcasting Corporation. This included travel talks, American music, and comment on American speech and American books. Another, Ronald E. Mitchell, has recently written an informal guidebook for British travelers in this country.

The question of whether foreign nations should be allowed to use radio facilities in this country for their own propaganda has become a serious one since the Mexican Government bought time on a NBC hook-up for this purpose. Congressman Raymond S. McKeough, of Chicago, has introduced a bill in the House (and Sen. David I. Walsh in the Senate) calling for an amendment to Section

317 of the Communications Act of 1934, according to which any radio address or radio programme broadcast by any foreign government or its subdivision shall not be broadcast until such radio address or programme has been submitted to the Department of State and shall have been approved by it.

The creation of an international tribunal with appellate jurisdiction over the decisions of National courts, involving questions of an international character arising in disputes concerning patents and inventions is being urged by Judge Manton, senior United States Circuit Judge of the Second Circuit. In an address to the Patent Bar Association in November, he announced his subject as "Universal Recognition and Protection of Inventions," and discussed ways and means for the more complete protection of inventive thought throughout the world. "The inadequacy of municipal laws to extend this general protection is conceded. This was made quite clear in the unwillingness of foreign inventors to exhibit their products at the Vienna Exposition of 1873 on account of the insufficient protection afforded by Austrian laws and the earlier forms of bipartite treaties." Judge Manton then outlined the general Convention of 1883, which created a Union for the Protection of Industrial Property, and indicated that this convention and those which have succeeded it leave no question "that we are still in the elementary stages of international legislation on industrial property."

For the first time since 1929, the Directors of the Woodrow Wilson Foundation decided to make an Award of the Foundation's Medal. At their annual meeting in May they voted that the medal should be conferred on Thomas G. Masaryk, President of the Czechoslovak Republic.

At the same time money awards were made to The Graduate Faculty of Political and Social Science (usually known as the "University in Exile"), and the National League of Women Voters, Washington, D. C., and the Women's International League for Peace and Freedom, Washington, D. C. The first named organization received \$4000; and each of the others, \$3000. In addition, a contribution of \$5000 was made to the League of Nations Association, to be used in its discretion for the furtherance of its educational work.

The Citation of the Woodrow Wilson Foundation in awarding its medal to President Masaryk calls attention to his steadfast support of the Wilsonian principles of democracy, self-determination, and personal freedom, and to the fact that he has maintained them in practice in the Czechoslovak Republic.

The International Council of the World Alliance for International Friendship through the Churches, assembled at Chamby, Montreux, Switzerland, August, 1935, felt constrained to issue to Christian Churches, their ministers, and members the following appeal:

I. The troubles and dangers of the world today are a grave concern to the Church, both because it is bound in love to humanity and because the very fundamental principles of the Christian religion and morals are at stake. A secular and pagan spirit openly proclaims the egoism of the State dominated by national, party, or class interests, as the highest standard, determining what is right and just. The Church must be true to its calling and therefore it must enter much more decisively than hitherto into a fight for bringing the ideals of our faith to bear upon the affairs of public life. This is a common conflict, in which Christians in all lands must unite, trying to reach a common conception of our duty in this hour of crisis.

II. Against the glorification of the State as the supreme authority, the first commandment must remain: the absolute rule of Christians. Loyalty to the State as an instrument for justice is a divine injunction. But Right is above

the State, not the State above Right; therefore the State must respect the rights both of individuals and of other States. It is only fair that the Churches should make it clear that Christians must always obey God rather than man, so that, wherever a State makes claims which the Christian conscience feels to be against divine law, Christians must refuse to follow or to cooperate. This may involve grave suffering, arising from the reaction of the State and excited popular feelings, as well as inner conflicts between obedience to God and what may seem to be patriotic duty. But ultimately obedience to God is true patriotism, because what is contrary to the laws of God will always in the long run prove to be a curse to the State and not a blessing.

III. It is especially urgent to combat the tendencies making for war. The terrible lessons of the World War should not be allowed to be forgotten. In spite of the fact that, like other great calamities, it called forth personal heroism, sacrifice, comradeship, solidarity, nevertheless it was an unparalleled instrument for destruction, creating millions of victims, killed, maimed, mentally broken, bereaved, filling the minds of men with hatred and lies, destroying sexual purity and family life, in many cases turning religious faith into despair or cynical indifference—not to speak of the immense material losses and the confusion of economic life. A future war would be much more cruel. And still men dare to play with such an idea as this. Solenn pledges not to use war as an instrument for settling international difficulties seem to be neglected; rearmament in many countries has taken the place of promised disarmament. The masses detest war, but are often paralyzed by what to many seems an inevitable destiny. The Christian Churches cannot remain silent in this hour of danger. We sympathize with the efforts of statesmen who seek to preserve peace, but the achieved results are mostly precarious and can be questioned tomorrow. A new foundation must be laid through a firm determination to banish war by promoting arbitration and general disarmament, by engendering respect for treaties and by strengthening and making more effective the League of Nations. Only in such ways can just grievances really be removed, while a victorious war will always cause a reaction. Many Churches and individual Christians have already solemnly declared that they will not countenance any war when their State has declined a bona-fide offer of arbitration. Further steps in this direction may become necessary.

IV. The deepest need is a new will, whose source Christians will always find in God. But we have only a right to protest against a secular and pagan spirit, if we are ourselves willing to be true followers of Christ. All that is noble in modern national and social movements should be taken as a challenge to repentance and renewal. The strong feeling of solidarity in class or nation, which has actually lifted millions out of a petty individualism into a larger life, but which at the same time has constantly encroached upon the freedom of others, should stimulate us to realize the Church Universal as an inspiring reality, binding men and women of all nations and races together in common love and loyalty to the same Master. And as individuals we must enter more deeply into the peace of God through his grace in Christ pardoning sins and changing lives.

We therefore call upon the Churches to support in the spirit of love the work for justice and peace through word and action and above all through prayer to Almighty God, that he may guide the leaders of the nations in their tremendous responsibility, so that they may see the right and in the light of this vision act courageously.

INTERNATIONAL LABOR ORGANIZATION. A permanent diplomatic and administrative association having in its membership 61 nations of the world, including the United States which became a member by Presidential proclamation Aug. 20, 1934, under authorization of a resolution of Congress June 19, 1934. The objectives of the Organization are the improvement of labor conditions within the member countries. The machinery of the Organization consists of an annual *Conference* of representatives of the member nations, and an *International Labor Office* controlled by a *Governing Body*, the latter consisting of 32 persons, 16 of whom represent the governments, 8 the employers, and 8 the workers, and meeting quarterly.

The annual Conferences are composed of 4 representatives of each of the member countries: 2 the government, 1 representing the employers and 1 the workers. These conferences discuss an agenda prepared by the Governing Body and draw up *draft conventions* and *recommendations* affecting industrial conditions which are presented to the competent authorities in each member nation

for ratification or adoption. The Constitution of the Organization imposes an obligation to present the draft treaties for consideration by the appropriate and competent authority in each country. When a convention has been ratified by two or more members it becomes an international treaty between the members so ratifying. All standards adopted are minimum. Up to the present time, the Conference has adopted 49 draft conventions. While 5 of these conventions have not yet come into force, the remaining 44 have received 679 ratifications.

The International Labor Office, which is situated at Geneva, Switzerland, acts as a secretariat for the annual conference, preparing material for the use of the conference and following up the work of the conference. It also acts as a bureau for the collection and dissemination of information bearing on the problems of labor and industry. It edits and publishes several periodicals and numerous reports and studies dealing with problems of industry of international interest. Director of Washington office, L. Magnusson, 734 Jackson Place, Washington, D. C.

INTERNATIONAL LAW. This subject is divided into two parts: PUBLIC and PRIVATE.

PUBLIC

Arbitration and Award. *"I'm Alone" v. United States*, *Am. Journ. of Int. Law*, XXIX, 326. On January 5, the Commissioners—Justice Willis Van Devanter, representing the defendant, and Lyman Poore Duff on behalf of Canada—filed their joint report, finding that the plaintiff ship (British, of Canadian registry), sunk "on the high seas" (Gulf of Mexico), Mar. 22, 1919, by the U.S. revenue cutter *Dexter*, for carrying liquor to be smuggled into the United States, had been, since September, 1928, owned and controlled by a group consisting, with one possible exception, of American citizens (for which reason "no compensation ought to be paid in respect of the loss of the ship or cargo") and that "the sinking . . . could not be justified by any principle of international law." It was recommended that the United States apologize to the Canadian government and pay it \$25,000, "as a material amend in respect of the wrong" (although the treaty under which the case was submitted did not include claims by a government), together with various amounts for the captain and crew, "none of whom was a party to the illegal conspiracy to smuggle." The Commissioners found it unnecessary to answer certain preliminary questions involving "the right of hot pursuit."

On January 21, the League of Nations Council at its 84th session, dealt with certain disputes under its Covenant, article XI, to which it gave the broader interpretation, favorable to the lesser powers, by indicating its willingness to accept jurisdiction of pecuniary claims. The boundary dispute between Iraq and Iran was left to direct negotiation, with Baron Aloisi of Italy as rapporteur. The expediency of hearing two war damage claims, one by Finland against Britain and another by Switzerland against Britain, France, Germany, and Italy, was left to a committee.

On April 6, the Permanent Court of International Justice at The Hague, by a vote of 8 to 3, decided in the plaintiff's favor, the case of *Greece v. Albania*, involving the question of minority schools and holding that the defendant was not justified in its contention that its abolition of private schools was a general measure, applicable as well to the majority. The dissenting judges also filed an opinion.

Italy v. Ethiopia, *Am. Journ. of Int. Law*, XXIX, 690. The Commission to deal with the "Walwal incident" of Dec. 5, 1934 (See YEAR BOOK 1934 under *Ethiopia*) met at Scheveningen on June 25, after a preliminary session at Milan to adopt a plan of procedure. Disagreement over the Commission's authority to inquire into "ownership" of affair's locus, forced a suspension of proceedings until August 20, when the Commission reconvened at Paris with M. W. Politis of Greece as a fifth arbitrator, the other four consisting of two each from the contending nations. After two weeks of deliberation, during which adjournment was taken to Berne "to receive depositions," an award was announced on September 3, to the effect that neither government was "responsible for the actual incident of Dec. 5, 1934." Although that "incident" was the chief ostensible grievance urged by Italy as a *casus belli*, its virtual elimination by the award, failed to prevent the Italian invasion of Ethiopia, a month later. See ITALY and ETHIOPIA under *History*.

Non-Aggression Pacts. On January 16, representatives of Netherlands and Norway signed a treaty providing a permanent conciliation commission to which all disputes between the two countries should be submitted.

On January 29, the Honduran Congress approved without modification, the Saavedra Lamas anti-war pact of the Montevideo Conference. The republic of Honduras ratified the Inter-American Conciliation treaty on February 14; Chile deposited its ratification on March 10, and the United States proclaimed its ratification on May 8.

Switzerland and Turkey adhered to the Geneva General Act for Pacific Settlement in January and were followed by Ethiopia on March 15 and India in July. Honduras and Bulgaria adhered to the "Argentine Anti-War Pact" (YEAR BOOK 1934, p. 320), Cuba's ratification thereof was deposited on January 21, and Nicaragua proclaimed its adherence on February 15. An arbitration treaty between Denmark and Venezuela, came into force on February 5; one between Spain and Panama on February 13, and ratification of such a treaty with Netherlands was recommended by the Japanese Privy Council on May 24. A secret treaty of amity and non-aggression was agreed to in October by Turkey, Iran, and Iraq.

Under the German-Swiss arbitration treaty, the former government, on May 6, accepted the latter's proposal to arbitrate the case of Jakob Salomon, anti-Nazi journalist, who, it was charged, had been decoyed into Germany from Switzerland, but who, Germany claimed, came voluntarily, and was arrested.

On July 1, a conference, opened at Buenos Aires by the Argentine President, with six foreign ministers present, prolonged the existing truce between Bolivia and Paraguay; but by August 15, an impasse had been reached over the status of war prisoners and on the following day it was announced that no further plenary sessions would be held until progress could be made toward settlement of some acute questions.

Commercial Pacts. Under the Reciprocity Act of June 12, 1934 (YEAR BOOK, 1934, p. 320), the United States Government has conducted negotiations with some 20 powers and effected reciprocal trade pacts with 7—Cuba, Haiti, Belgium, Sweden, Brazil, The Netherlands, Canada. The latter, signed November 15, is expected to open the door to a wider extension of the scheme throughout the Western Hemisphere. On January 3, a limited trade agreement between Britain and the Irish

Free State was signed in London; on January 4 at Montevideo, a one-year trade pact between Spain and Uruguay; on January 20, an indefinite extension of the provisional trade agreement between Canada and Austria; on January 28, another between Germany and the Irish Free State; on February 5, another between Peru and Chile, effective in November; on May 31, another between Egypt and Palestine, and on September 12, another between Hungary and Yugoslavia for the balance of 1935.

Extradition. The literature of this important subject has been greatly enriched by the publication (*Am. Journ. of Int. Law*, XXIX, 66-240) of a "draft convention" (proposed treaty) prepared under the auspices of the Harvard Law School Research in International Law. The convention paper consists of 28 articles and, with its appendices, etc., covers nearly 400 pages. There is an ample bibliography, a "chronological list of extradition treaties" (of which there have been over 100 during the present century), texts of selected treaties and "selected extradition statutes" of many countries—almost an encyclopædia of the subject.

On February 6, the United States Senate ratified an extradition treaty with Iraq and supplementary extradition pacts with Bulgaria, Estonia, Latvia, San Marino, and Switzerland, all adding fraudulent bankruptcy as an extraditable offense.

An international conference, called by the Danish Government, met at Copenhagen on August 31 to discuss practical phases of extradition, such as the definition of "political crime," the treatment of "political prisoners," and the suppression of terrorism. Representing 31 countries, 113 delegates were present.

The Costa Rican *Tribunal Supremo*, in October, confirmed a lower court decision refusing extradition of the Guatemalan student, Antonio Garcia Ariza, on the ground that the charge against him was fictitious and that the actual purpose of the proceeding was political.

Extraterritoriality. An article entitled "Extraterritorial Jurisdiction in the Ancient World" (*Am. Journ. of Int. Law*, XXIX, 237) by Shalom Kassan, formerly of the Palestine Government service, tells of the Hebrews in Goshen, living under their own customs and officials, as an early instance of enjoying the privilege; but finds that "the ancient world . . . never permitted members of other communities to enjoy the law of the state."

China. A correspondent from Shanghai writes under date of October 15:

"The Japanese have created a complete legal establishment in Manchukuo, having staffed all the courts with Japanese judges and other officials. Now they have announced that extraterritoriality will be abolished; which means that foreigners will come, not under Chinese, but under Japanese, law as administered by Japanese personnel in the Manchukuo courts.

Doubtless even the Chinese would prefer the present system to such an arrangement, but certain other events have tended to revive the agitation to abolish extraterritoriality—e.g. the new judge of the United States Court for China has broken all precedent by holding a session at Peking, capital of the old Chinese Empire, with which the treaty conferring the privilege was made. That treaty nowhere authorizes foreign courts in Peking; they are permitted only at cities where there is a consulate of the nation exercising the privilege; and no consulate was ever tolerated in Peking. Another was the conduct of the new U.S. Marshal, who came out from Texas "with a ten-gallon hat and a six shooter," and according to the written

complaint of an American citizen to his Consul General, "forcibly took (certain film) negatives from me and handed them over to the Japanese authorities."

But far more serious than these was the collapse of a group of concerns founded by one F. J. Raven, including the "American Oriental Bank" supposedly operating under a Connecticut charter but actually, as it proved, having none at all—a situation possible only under extraterritoriality. Among the bank's directors is the former judge (Purdy) of the U.S. Court for China, and its depositors numbered thousands, including many missionaries and others of small means, whom the bank's officers are now charged with defrauding.

Germany. A decision of the Reichsgericht (Supreme Court) that an assassin might be taken from a foreign legation and tried for his offense, contained the statement that "the offices and dwellings of diplomatic representatives to the Reich, are not to be regarded as foreign territory," which occasioned no little perturbation among the envoys in Berlin. It was later explained, however, as restricted to the special circumstances of the case in judgment and not as indicating that diplomatic extraterritoriality had been abolished.

Mandates. The growing importance of this subject is indicated by the publication of Dr. A. M. Margalith's treatise (Johns Hopkins Univ. Studies in History and Political Science, extra vol. N.S., 8, pp. IX, 242). A by-product of the League of Nations, no mandate has ever been granted to any but a League member. As such, Japan sought and accepted a mandate for the former German South Sea Islands, north of the equator. An article in the *China Law Review* (VI, 296) by Dr. Tan Shao Hwa points out that a mandate does not confer sovereignty and argues that Japan's withdrawal from the League terminated her mandatory privilege. Apparently the Japanese Government considered it advisable to assert its position, and in a statement presented to the League's Mandate Commission on October 28, the Japanese representatives claimed that the mandate really came from "the principal allied and associated powers" and virtually denied the League's right to withdraw it. But, as Dr. Tan suggests, Germany, whose title as former sovereign has never been formally divested, "may present a claim." The Japanese statement was referred to the League Council.

Nationality. On February 6, the United States Senate ratified treaties with Albania and Sweden, exempting from military service naturalized Americans while in foreign territory. The Hague Protocol on military obligations in cases of dual nationality was ratified by El Salvador. Australia's adhesion was deposited on July 8. The Hague Protocol on "statelessness" was ratified by China on February 14 and by Chile on March 20. The Irish Free State measure (1934 YEAR BOOK, p. 320) terminating common citizenship with the British Empire passed the Senate and became the law of the Free State; eligibility of its citizens to posts in the British service, remains unsettled. On June 26 Honduras ratified the Montevideo "Convention on the Nationality of Women" (1934 YEAR BOOK, p. 320) and on July 22 the United States and Albania exchanged ratifications of a naturalization treaty signed in 1932.

Neutrality. The U.S. Congress, which enacted the first neutrality law, adopted on August 31, a Joint Resolution, "providing for the prohibition of the export of arms, etc., to belligerent countries," which was followed on October 5 by a Presidential

Proclamation, enumerating the contraband articles; manufacturers and dealers therein are required to register with the Secretary of State and obtain licenses to conduct business. The resolution has been criticized as having "no relation whatever to the prevention of war" since "it makes no provision for the prohibition of loans and credits to a belligerent, nor for the export of foodstuffs, etc."

Taxation. A serious burden upon American trading in France and a source of irritation between the two countries, was removed (conditionally) by the French Senate's approval on March 29 of a long pending treaty designed to stop double taxation. It consists of 10 articles, the first providing that "enterprises of one of the two contracting states are not taxable by the other except on profits allocated to permanent establishments" in the latter. A similar treaty between Netherlands and Sweden was signed at Stockholm on March 21. Carroll's "Development of International Tax Law" in the *American Journal of International Law*, XXIX, 586, is a valuable contribution to the subject.

Treaties. "Pactomania" is the term applied to recent trends in treaty making, by John Heenan, president of the Independent Labor Party in Scotland, who listed 115 treaties during the past decade; but that upon which we are entering bids fair to become a "treaty-breaking" era. The famous (Kellogg) Pact of Paris, widely acclaimed so late as 1928, has been openly flouted by two of its leading signatories—Japan and Italy—while the Versailles Treaty, embodying the results of the World War, has now been defied by Germany. On March 16, the German Government promulgated a "law for the creation of a defense force," providing for universal conscription and an increase of the "peace army" to 12 corps commands and 36 divisions. Chancellor Hitler, in a lengthy appeal, defended the action (which virtually repudiated the treaty's unconditional disarmament obligations) on the ground that the other signatories had not observed their undertakings, though none of them had ever promised to disarm. Following closely on this episode, the Oxford University Press issued on April 5, *The Treaty of Versailles and After* by various authors, including Lords Riddell and Reading, Professors C. K. Webster and A. J. Toynbee, and Norman Angell. On April 17, the League of Nations Council adopted a resolution condemning Germany's course and naming a committee of 13 to study non-military sanctions against future treaty violations. It met at Geneva during the month of May and named a legal and economic sub-committee to investigate technical difficulties. Meanwhile, on April 29, the British note to Japan frankly charged that the latter "has attempted to justify an action (in Manchuria) that involves a clear breach of these . . . obligations." After the Italian invasion of Ethiopia in October, the League of Nations Council adopted a resolution declaring Italy the aggressor and hence a treaty violator. Sanctions in the form of commercial boycotts were approved by nearly all League members and become nominally effective November 18, though the Vatican was reported seeking postponement.

Other Conventions. On February 27, agreements between Bulgaria and Yugoslavia were signed at Sofia, simplifying the passport regulations and adding border communication points. On April 15, "Pan-American Day," representatives of the American nations joined at the White House in the "Roerich Pact" (named for the New York museum's founder) guaranteeing the inviolability,

in war as well as peace, of monuments and other cultural remains, which are now to be protected by a special international flag. On November 15, the "Tangier Statute," governing the international administration of that demilitarized zone, was automatically extended with modifications until 1948, none of the signatories having objected. Publication at The Hague is announced of *Corpus Diplomaticum Neerlandico-Indicum* (Vol. III, pp. xix, 616) containing treaties, etc., 1596-1691, between Netherlands and Asiatic states.

PRIVATE

Claims. On January 31, after 14 months of negotiation, following the 1933 agreements with Russia, Secretary of State Cordell Hull announced that "we can not encourage the hope that any agreement is now possible regarding unsettled claims." The following day marked exchange of ratifications of the General Claims Convention between the United States and Mexico, extending for two years, the period for disposing of claims arising before Aug. 30, 1927, and of the Protocol of 1934, for commissioners to pass on claims. An agreement was announced on June 28, by which Mexico will pay (in yearly installments of \$600,000) \$5,448,020.14 in full settlement of all American revolutionary claims against Mexico, accruing 1910-1920; similar lump sum settlements having been made by six European powers. On April 15, representatives of the United States and Canada, signed at Ottawa, a convention for the final settlement of claims against the smelter at Trail, B.C.

Copyright. Australia's adherence to the International Copyright Convention (1934 YEAR BOOK, p. 318) became effective January 18; the South African Union's on March 19. On April 19, the U.S. Senate ratified the same convention, but on April 22 the vote was reconsidered and the convention "restored to the executive calendar." On August 7, the Senate passed the Duffy Copyright Bill (then pending over two years) after deleting the provision relieving foreign authors of the necessity of reprinting in this country. In *Hungarian Radio Co. v. Gramophone Co., Ltd.* (*Amer. Journ. of Int. Law*, XXIX, 698), the Royal Hungarian Supreme Court, on May 24, held that the use of gramophone records of foreign artists' performances, by broadcasting or otherwise, infringed neither the Hungarian Copyright law nor the Berne Convention.

Radio. Panama, on March 29, and Venezuela on May 9, deposited ratifications of the "Radio Communications Regulations and Protocol" of Madrid, 1932. In *Radio Corp. of America v. Republic of China*, the plaintiff, on Nov. 10, 1928, entered into a traffic agreement with the defendant government, to make the former's, "the main, direct circuit between China and the United States, enjoying the routing privilege and as such, a preferential treatment." There was an arbitration clause and plaintiff's complaint that the agreement had been violated by another between defendant and the Mackay Company, was thereunder submitted in 1934 to a board of arbitrators who, after hearing the evidence and arguments, found, generally in China's favor, in June; but evidently deemed it necessary to point out certain practical considerations and courses which would constitute a breach of the agreement. Costs were divided equally.

Sea and Air Law. On January 7, an agreement by exchange of notes between Germany and Spain authorized air service to South America, with landings at Barcelona and Seville. On March 21,

Britain exchanged ratifications with Poland of a convention to regulate tonnage measurement of merchant vessels. Another, evidenced by an exchange of letters between the United States and Britain, announced on April 23, grants to aircraft of each country the "right of flight" over the other's territory, subject to local regulations, etc. The approximation of sea and air law appears in the provision for transporting goods on the same basis as by ship. On May 31, Bulgaria ratified the Geneva treaty relative to the "Weight of Packages on Vessels"; in July, China deposited ratification of the Lisbon treaty on "Maritime Signals" and Belgium deposited ratification of the "Safety at Sea" treaty (1933 YEAR BOOK, p. 372).

Necrology. Butler Aspinall, K.C., outstanding maritime lawyer, died in London, November 15, aged 74. He served as counsel or commissioner in many important maritime causes and was chairman of the International Shipping Conference of 1928.

INTERPARLIAMENTARY UNION. The thirty-second annual meeting of the American group of the Interparliamentary Union was held on January 21, Rep. S. D. McReynolds, vice-president of the group, presided. The permanent executive secretary called attention to certain rules and regulations of the Interparliamentary Union, under the terms of which it is the duty of the American group to keep the Congress informed, through its committee or through one of its members, of resolutions adopted at the Conferences which call for parliamentary or governmental action.

Although the American group was unable to send a delegation to the Brussels conference it has continued its interest in the Union and has given tangible proof of it in securing an increase of the American appropriation from \$7500 to \$10,000 a year.

The thirty-first conference of the Interparliamentary Union met for five days, beginning July 26, in the Assembly Hall of the Belgium Senate in the City of Brussels and was marked by thoroughgoing discussions of judicial problems relating to the codification of world law, and to questions of neutrality and assistance. Attention was given to the fact that because of the Briand-Kellogg Pact wars are now waged without the formality of the declaration. To the thesis that lasting peace can be achieved only through the law of world solidarity and automatic mutual assistance there arose definite inquiries. Would not such a system stabilize existing situations and emphasize peace treaties rather than peace itself? Would not automatic multi-lateral plans for assistance require the conclusion of more pacts at a time when new pacts are depreciating those which already exist? Would not any plan involving automatic assistance throw states into war against their will? Repeated discussions of questions such as these resulted in clarifying the minds of parliamentarians upon the part that force must play within the peace structure of the nations. To one who has followed these Conferences for a number of years it is apparent that parliamentarians are losing faith in the possibilities of any international organization to enforce peace.

The discussions of economic and monetary problems dealt with questions of self-sufficiency and international solidarity, and with the stabilization of currencies. While it was agreed that the world economic crisis can be overcome by international agreements, the debate ranged over the dangers of excessive protection to industry in agricultural countries, the necessity for the control of credits, the usefulness of air transport, the importance of

understanding and good will between town and country producers, certain evils of unfair competition, the regulation of the trade in arms, and the like. The resolution as finally agreed upon is a fair summary of the views of the Conference to date upon the world's economic and monetary problems.

The discussions upon certain phases of the parliamentary system dealt mainly with: First, the legislative functions; second, the work of parliamentary committees; and third, legislative documentation. These technical matters, while of less public interest, are peculiarly germane to the purposes of the Interparliamentary Union; for that useful organization exists because of man's faith in the representative system of government, and because that system, like every other human programme, is in constant need of improvement and adjustment. Considering the parliaments represented it is not surprising that the Conference felt called upon to agree that the delegates must scrupulously soft-pedal discussions of representative systems of the various countries to which its members belong.

Delegates were present from Austria, Belgium, Canada, Czechoslovakia, Denmark, France, Great Britain, Hungary, Ireland, Italy, Japan, Netherlands, Norway, Poland, Rumania, Spain, Sweden, Switzerland, Turkey, and Yugo-Slavia.

INTERSTATE COMMERCE COMMISSION. See AERONAUTICS; RAILWAYS; UNITED STATES under *Administration*.

INTERSTATE SANITARY COMMISSION. See SEWERAGE AND SEWAGE TREATMENT.

IOWA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,470,939; on July 1, 1934, by latest Federal estimate, 2,485,000; 1920 (Census), 2,404,021. Des Moines, the capital, had (1930) 142,559 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	9,525,000	352,425,000	\$176,212,000
	1934	8,986,000	195,895,000	154,757,000
Oats	1935	5,946,000	205,137,000	49,233,000
	1934	4,682,000	58,525,000	26,336,000
Hay (tame) ..	1935	3,204,000	5,292,000*	34,927,000
	1934	3,246,000	2,983,000*	46,833,000
Barley	1935	594,000	15,444,000	5,714,000
	1934	410,000	5,125,000	3,792,000
Potatoes	1935	84,000	6,300,000	4,095,000
	1934	80,000	5,280,000	4,330,000
Wheat	1935	371,000	6,118,000	5,261,000
	1934	302,000	3,506,000	3,085,000
Soy beans	1935	400,000	6,800,000	4,692,000
	1934	157,000	1,884,000	2,148,000

* Tons.

Mineral Production. The mining of coal increased to the yearly total of some 3,468,000 net tons for 1935, from 3,194,983 for 1934. There were produced in the State, in 1934, 180,271 short tons of gypsum, of which the total value was \$1,670,356.

Education. For the year ended with June 30, 1935, the number of the State's inhabitants of school age was reckoned as 722,185. The ages of those comprised in this total were from 5 years to 21. The year's enrollments of pupils in the public schools numbered 541,095. Of these, 406,627 were in kindergartens and elementary classes, through the eighth grade; 1872, in ungraded classes; and 132,596, in high schools. The year's expenditure for public-school education throughout the State totaled \$37,524,273.

Charities and Corrections. As in previous years, the State maintained over its institutions for

the care and custody of persons a strong central authority, resting in the statutory Board of Control of State Institutions. This board held broad power to govern and control institutional operation.

The population of the State institutions on Nov. 1, 1935, totaled 15,175. The institutions and their respective populations were: Four State Hospitals for the Insane and Inebriate, at Cherokee (1756), Clarinda (1716), Mount Pleasant (1614), and Independence (1709); Training School for Boys (599), Eldora; Training School for Girls (174), Mitchellville; Men's Reformatory (1136), Anamosa; State Penitentiary (1586), Fort Madison; Women's Reformatory (102), Rockwell City; State Juvenile Home (322), Toledo; Iowa Soldiers' Orphans' Home (655), Davenport; State Sanatorium for Tuberculosis (344), Oakdale; Iowa Soldiers' Home (436), Marshalltown; Institution for Feeble-minded Children (1759), Glenwood; Hospital for Epileptics and School for the Feeble-minded (417 and 860 respectively), Woodward.

Legislation. The regular session of the Legislature served the interest of the mortgaged farmers of the State by extending for a second stretch of two years the life of the State's mortgage-moratorium law of 1933. It imposed a discriminatory tax on the business of chain stores, which included filling stations for automobiles.

Political and Other Events. The support of the destitute unemployed in Iowa in 1934 cost about \$14,250,000, of which the FERA paid 55 per cent, the State 12½ per cent, and the subdivisions 32½ per cent. The opportunities for employment on the farms improved in the summer of 1935. There then came to be an actual shortage of needed farm workers, although at the time the relief rolls were well stocked with unemployed men supported at public expense. Many of the counties, led by Harrison County on July 6, temporarily removed employable persons from the relief lists, in an endeavor to make them return to occupation.

Mayor W. D. Hayes of Sioux City was suspended from authority on July 15 by court order, upon the filing of a petition for his removal, based on the findings of a grand jury, that he had failed to take action against "lawless conditions."

Officers. The chief officers of the State, serving in 1935, were Governor, Clyde L. Herring; Lieutenant-Governor, Nelson G. Kraschel; Secretary of State, Mrs. Alex Miller; Treasurer, Leo G. Wegman; Auditor, C. W. Storms; Attorney-General, Edward L. O'Connor; Secretary of Agriculture, Ray Murray; Superintendent of Public Instruction, Agnes Samuelson.

Judiciary. Supreme Court: Justices, E. G. Albert, John W. Anderson, Maurice F. Donegan, W. H. Hamilton, John W. Kintzinger, Richard F. Mitchell, James M. Parsons, Leon W. Powers, Paul W. Richards.

IOWA, THE STATE UNIVERSITY OF. A coeducational State institution of higher learning in Iowa City, founded in 1847. The enrollment for 1934-35 was 9402. For the autumn of 1935 the enrollment was 7481, including 1049 correspondence students not also registered in residence. The summer session registration totaled 4184. There were approximately 570 members on the faculty. The income for 1934-35 was \$4,607,869. The libraries contained 471,800 volumes. President, Eugene Allen Gilmore, A.B., LL.D.

IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS. A State institution for the higher education of men and women in Ames, Iowa, founded in 1868. The

enrollment for the autumn term of 1935 was 4430. The registration for the first half of the 1935 summer session was 1179, and for the second half, 516. The faculty numbered 504 members. The endowment funds amounted to \$671,500 and the income for the year was \$3,110,000. The library contained approximately 230,000 volumes. President, Raymond Mollyneaux Hughes, LL.D.

IPPOLITOV-IVANOV, ĕp-pŏl'ĕ-tŏf-ĕ-vă-nŏf, MICHAÏL MICHAÏLOVITCH. A Russian composer, died at Moscow, U.S.S.R., January 28. Born at Gatchina, Russia, Nov. 19, 1859, he became a pupil at the St. Petersburg Conservatory in 1875. He remained there until 1882 studying composition under Rimsky-Korsakov. For the 10 years that followed he lived in Tiflis, in the Caucasus, as director of the conservatory and conductor of the symphony concerts, and the opera, both affiliated with the Imperial Russian Music Society. During this stay he became deeply interested in the folk songs of the Caucasian district, especially those of Georgia, and the results of his studies he published later in a book, *The Georgian Folk-Song* (in Russian), that became the standard authority. Through the influence of Tschaiakowsky he became, in 1893, professor of composition at the conservatory in Moscow, and in 1906 succeeded Safonoff as director of that institution. After 1899 he was also conductor of the Moscow Private Opera, through which he greatly encouraged the efforts of the younger nationalist composers, although his personal sympathies inclined more towards the style of Tschaiakowsky. In his later years, Ippolitov-Ivanov had been working upon an opera entitled *Last Barricade*, depicting the Paris Commune of 1870. Although one of the foremost artists under the Czar, he was considered a revolutionary in his musical ideas by the Soviets and honored with the title, "People's Artist." On the 50th anniversary of the beginning of his musical career he received the Order of the Red Banner. His chief works were: the operas, *Ruth*, 1887; *Assya*, 1900; *Yabava Putyatishna*, 1901; *Treachery*, 1911; a concert overture, *Yar Khmel*; a symphonic scherzo; an orchestral suite, *Caucasian Sketches*; a sinfonietta; several cantatas and choral works, a *cappella* and with orchestra; chamber music of a very high order; songs; and compositions for the piano.

IRAN (PERSIA). A kingdom of southwestern Asia. Capital, Tehran (Teheran); reigning Shah in 1935, Riza Khan Pahlevi (crowned Apr. 25, 1926).

Area and Population. With an area of about 628,000 square miles, Iran has a population roughly estimated at 10,000,000, including 3,000,000 nomads. The nomads are estimated in round numbers at 720,000 Turks, 260,000 Arabs, 675,000 Kurds and Ieks, 234,000 Lurs, and 20,700 Baluchis and Gipsies. Estimated populations of the chief cities are: Tehran and its district, 350,000; Tabriz, 180,000; Isfahan, 100,000; Meshed, 85,000; Resht, 80,000; Kermanshah and Abadan, 40,000 each. The people are mainly Moslems of the Shiite sect.

Education. The educational system has been extensively reorganized and improved. A 1932 report placed the number of schools of all categories at 3642, with 182,000 pupils. There are also numerous religious and street schools. Foreign schools are maintained by American, British, Jewish, and French religious organizations and also by the German and Soviet governments, but children of Persian subjects are forbidden to attend them.

Production. The chief occupations are agriculture and stock raising. Estimated production of the

chief crops in 1932-33 was (in metric tons): Wheat, 1,384,200; barley, 625,100; rice, 413,700; tobacco, 16,100; cotton, 15,500. Fruits of various kinds and gums are important products. Wool produced in 1931 was estimated at 22,200 metric tons. Livestock estimates for 1933 were: Cattle, 1,296,800; sheep, 8,544,200; goats, 8,087,800. The petroleum output rose to 52,663,782 bbl. in 1934 from 49,581,000 in 1933. Rug manufacturing, the principal industry, has declined in recent years, but substantial progress in the establishment of textile and sugar mills and other new industries was reported.

Foreign Trade. Foreign trade, since 1931, has been conducted as a government monopoly. The monopoly, designed to balance imports and exports, operates through a system of permits and quotas, the quotas usually being fixed at the beginning of each economic year (June 22) and covering all articles to be imported during the year. For the year ended June 21, 1934, total imports were valued at 605,494,000 rials (U. S. gold \$22,403,000) and exports totaled 1,817,257,000 rials (\$67,238,000). This compared with imports in 1932-33 of 611,665,000 rials (\$21,210,000) and exports of 1,675,055,000 rials (\$58,124,000). Petroleum exports in 1933-34 were valued at 1,336,941,000 rials, or 73.6 per cent of all exports. Wool rugs, ginned cotton, and lamb skins were other leading exports. Cotton textiles, sugar, iron and steel, machinery, and automobiles were leading imports. Of the 1933-34 imports the Soviet Union provided 24.1 per cent; Japan, 13.6; United Kingdom, 10.5; British India, 9.9; United States, 9.6. Excluding petroleum, which went almost entirely to the United Kingdom, the distribution of exports by value in 1933-34 was: Soviet Union, 21.7 per cent; United States, 16.1; United Kingdom, 11.8; British India, 11.8; Japan, 2.6.

United States statistics showed imports from Iran in 1935 of \$3,634,968 (\$3,285,677 in 1934) and exports to Iran of \$4,339,326 (\$3,686,515 in 1934).

Finance. The financial year commences March 22. Actual budget returns for recent years are not available, but estimates of budget receipts showed a marked increase from 400,600,000 rials in 1931-32 to 506,912,227 in 1933-34, 621,413,417 in 1934-35, and 751,123,487 in 1935-36. A small surplus was budgeted for in the latter three years as follows: 1933-34, 7767 rials; 1934-35, 105,552; 1935-36, 295,697. The above general budget figures do not include the Anglo-Iranian Oil Company royalties, held as a special reserve fund, the sugar and tea monopoly tax receipts earmarked for railway construction, and road tax receipts utilized for highway construction and municipal improvements.

The total debt on Aug. 14, 1933, was reported at 113,600,000 rials (foreign debt, 106,900,000 rials at par). The average exchange value of the silver rial in the calendar year 1934 was approximately \$0.063 (\$0.047 in 1933).

Communications. Iran in 1934 had about 467 miles of railway line in operation and some 4000 miles of motor highways. The major transport project under way was the trans-Iranian Railway (801 miles long) which will link the Persian Gulf with the Caspian Sea by way of Tehran. On Mar. 31, 1935, 235 miles of this railway were in operation and an additional 70 miles of line had been completed. Construction is scheduled for completion at the end of 1939. The cost of railway construction is a heavy burden upon national finances. In the year ended June 21, 1933, the tonnage entering Iran's Persian Gulf ports was 5,756,025; Caspian ports, 289,309.

Government. Executive power is exercised by

the Shah, acting through a cabinet appointed and controlled by him. There is a parliament (Medjlis) of 136 members, elected for two years, which gives legislative sanction to measures proposed by the Shah and his cabinet. Premier in 1935, Muhammad Ali Khan Ferozghi.

History. Emulating his eminent neighbor, Mustapha Kemal Ataturk of Turkey, the Shah of Iran continued his work of modernizing his kingdom in 1935 despite sporadic opposition. In July a cabinet decree was issued ordering the people to abandon the Moslem fez in favor of the European hat. Although enforced without great difficulty throughout most of the kingdom, the decree precipitated severe rioting by angry Moslems, incited by their priests, in the city of Meshed, long known for its strongly Moslem sentiment. Scores were reported killed and injured before government troops restored order. Early in August the Irani Cabinet was reported to have approved a bill canceling all feudal titles.

Meanwhile modernization in the economic sphere was being pushed through the establishment of factories for the manufacture of textiles, sugar, and other prime necessities previously imported. In her economic development Iran was receiving vitally important aid from the Soviet Union. In April an economic mission left Tehran to study Russian industry and farming and late in August a commercial agreement was signed in which the Russians agreed to extend further aid in the establishment of Irani industries. Besides supplying Iran with tools, machinery, and technical equipment, the Soviet Government signed a contract to construct in Iran a great flour mill, a mechanical bakery and cereal products factory, 20 grain elevators, five rice-husking plants, and other establishments.

The tightening of economic ties was accompanied by the strengthening of the political bonds between Iran, the Soviet Union, and Turkey. "It may safely be said," Walter Duranty wrote from Moscow to the *New York Times* on Sept. 7, 1935, "that today there exists among Turkey, Iran and the U.S.S.R. an *entente cordiale* that envisages concerted action should occasion arise." The frontier dispute between Iran and Iraq continued during 1935. The dispute, arising from Iraq's claim to sovereignty over all the waters of the Shatt el Arab—the boundary river providing Iraq's only outlet to the sea—was submitted for settlement to the League Council in 1934.

The rise in the price of silver during 1935, caused in part by the silver-buying policy of the United States Government, early in the year produced a sharp increase in the exchange value of the silver rial, with consequent adverse effects upon Irani exports. The banks in Iran, while willing to buy foreign exchange, were unwilling to sell it, with the result that by the beginning of May the import trade was practically paralyzed. The government had permitted a high exchange rate to check smuggling of silver out of the country, but on May 8, with an economic crisis impending, the National Bank reversed this policy and arbitrarily reduced the foreign exchange value of the rial. In ensuing months the large-scale smuggling of silver coins out of the country resulted in a great scarcity of small coins. In September the Irani Government was reported to have begun to export silver in an effort to bolster the rial in foreign centres, as a serious shortage of foreign exchange caused it to depreciate in July and August.

IRAQ (IRAK). An Arab kingdom occupying the basin of the Tigris and Euphrates rivers in

Mesopotamia. Capital, Bagdad. Ruler in 1935, King Ghazi I, who succeeded to the throne Sept. 8, 1933.

Area and Population. The area of Iraq is roughly 143,250 square miles and the estimated population as of Dec. 31, 1933, was about 3,300,000. The population is overwhelmingly Moslem, with small Christian and Jewish minorities. The chief cities, with their estimated populations, are: Bagdad, 300,000; Mosul, 60,000; Basra, the chief seaport, 50,000. Government primary schools in 1933-34 numbered 458, with 53,393 pupils; intermediate schools, 21, with 3029 pupils; and secondary schools, 6, with 425 pupils. There are several technical, professional, and military schools. Al ul Bait University was opened in 1926.

Production. Agriculture is the chief occupation and dates constitute the chief export. Other products are wheat, barley, rice, cotton, oats, linseed, tobacco, fruits, wool, and sheep casings. Oil production (1934) was 340,000 metric tons (115,000 in 1933). Pipelines carrying oil from the Kirkuk fields to the Mediterranean at Haifa and Tripoli were placed in operation in 1934. Some asphalt is produced.

Foreign Trade. Imports for the fiscal year ended Mar. 31, 1935, totaled 6,104,844 dinars (6,025,000 in 1933-34) and exports were 4,785,338 dinars (2,874,000 in 1933-34). Dates, barley, wool, and wheat were the leading exports. United States statistics for 1935 showed general imports from Iraq of \$4,071,029 (\$2,722,379 in 1934) and exports to Iraq of \$1,572,326 (\$1,328,624 in 1934). Iraqi imports from Great Britain in 1934-35 were £1,541,732; exports to Britain, £1,504,052.

Finance. For the fiscal year ended Mar. 31, 1935, general budget receipts were 4,000,940 dinars and capital works budget receipts were 1,008,429 dinars. Against total receipts of 5,009,369 dinars there were expenditures totaling 4,164,426 dinars (general, 3,735,374; capital works, 429,052). Oil revenues amounted to 678,000 dinars. A net surplus of 1,009,900 dinars was reported in the Treasury as of Apr. 1, 1935. There was no public debt. The dinar is equivalent to the pound sterling.

Communications. In 1934 Iraq had 753 miles of state-operated railway lines, excluding sidings; 4652 miles of highways; and was crossed by British, French, and Dutch airlines from Europe to India and the Far East. The Tigris and Euphrates Rivers and the Shatt al Arab were important transport systems.

Government. The Constitution of Mar. 21, 1924, provided for a limited monarchy and a government responsible to Parliament, which consisted of a Senate of 20 members nominated by the King and a Lower House of 88 elected members. In 1935 the number of Deputies was increased from 88 to 107. Great Britain's mandate for Iraq on behalf of the League of Nations was abolished following the conclusion of an Anglo-Iraqi treaty of alliance on June 30, 1930, and Iraq was admitted to the League of Nations as a sovereign state on Oct. 3, 1932.

History. Iraq's lack of well developed political parties with stable organizations was again evidenced during 1935 by repeated cabinet overturns. The two rudimentary political organizations which alternately controlled the government were the Nationalists, led by Gen. Yasin Pasha el Hashimi, and the Progressives, under Jaafar Pasha and Nuri Pasha as Said. Dissatisfaction with government policies expressed by two tribal chieftains in the region of the Middle Euphrates caused the

resignation of Prime Minister Ali Jawdat Beg on February 24. His successor, Jamil Bey al Midfai, proved even less satisfactory to the two discontented tribes, which rose in revolt in the middle of March. Jamil Bey and his cabinet resigned on March 16 and Gen. Yashin Pasha el Hashimi formed a new ministry which ended the tribal rebellion without the use of force.

Asserting that friction between Parliament and the cabinet made it impossible to carry out needed reforms, King Ghazi on April 9 dissolved Parliament and called new elections for early in August. The voting gave Yasin Pasha's government a two-thirds majority in the Lower House. Meanwhile another tribal uprising near Ramaitha in May had disrupted all communications between Bagdad and Basra for nearly a week. Government troops put down the revolt with little difficulty.

While the turbulent Arab tribes were treated with leniency by the Iraqi Government, the non-Moslem minorities did not fare so well. In mid-October troops were sent against the Yezidis, a sect of devil-worshippers inhabiting the Jebel-Sinjar area 80 miles west of Mosul, after they had refused to register for conscription under the National Defense Law. The Yezidis suffered heavy losses in the ensuing fighting and many of those captured were imprisoned for long terms. Plans for transferring from Iraq the remnants of the Assyrians, whose revolt was crushed with much bloodshed in 1933, were finally completed in 1935. The proposals for settling them in British Guiana were abandoned and the French offer to permit their settlement on the Ghab Plain of Syria was accepted by the League Council in December. Great Britain and Iraq each contributed £250,000 to finance their migration and the League also promised financial help.

The opening in 1934 of the pipelines connecting Kirkuk in the Mosul oil fields with the Mediterranean (see map in 1934 YEAR BOOK, p. 38) meant a great increase in Iraqi revenues from oil royalties. These revenues were segregated in a capital works budget and early in 1935 a five-year programme of public improvements was adopted, to be paid for with the royalties. Chief among these projects was one for the reclamation by irrigation of the desolate region between the Tigris and Euphrates rivers below Bagdad, in ancient times renowned for its fertility. Work was begun on a \$6,000,000 dam across the Tigris at Kut-el-Amara. It was announced at London on September 16 that Italian capital had entered the Iraqi oil fields by purchasing majority control of two British companies holding a concession of about 45,000 square miles from the Iraqi Government—the Mosul Oil Fields, Ltd., and the British Oil Development Company.

Other domestic events of the year were the birth of an heir to the throne on May 2 and the conclusion of an Anglo-Iraqi agreement for final transfer of ownership of the Iraq Railways to the Bagdad government. The terms called for payment to the British Government of 40,000 dinars and the retention by the railways of a limited number of British officials for a fixed period.

The legal dispute between Iraq and Iran over their respective rights in their boundary river, the Shatt al Arab, dragged on before the League Council in 1935 without assuming a serious aspect. It was reported from London on October 20 that Iraq, Iran, and Turkey had recently concluded a pact of amity and non-aggression. On December 2 it was reported that Iraq and Saudi Arabia

had concluded a treaty pledging military and economic collaboration. See ARABIA, IRAN, and TURKEY under *History*; *ARCHAEOLOGY*.

IRELAND. An island west of England and Scotland. Total area, 31,837 sq. miles; total population (1934 estimate), 4,273,000 compared with 4,228,553 (1926 census). See IRELAND, NORTHERN; IRISH FREE STATE.

IRELAND, NORTHERN. A constituent part of the United Kingdom, comprising six counties and two parliamentary boroughs in northern Ireland. Capital, Belfast.

Area and Population. With a land area of 3,351,444 acres, Northern Ireland had an estimated population in 1934 of 1,279,000 (1,256,561 at the 1926 census). Living births in 1933 numbered 24,601; deaths, 18,154; marriages, 7630. The population of Belfast was 415,151 in 1926; of Londonderry, 45,159. At the 1926 census there were 781,652 Protestants and 420,428 Roman Catholics. In 1934-35 there were 1790 public elementary schools, with 203,550 pupils; 74 preparatory and secondary schools, with 12,974 pupils; and 121 technical schools, with 23,234 pupils. Queen's University in Belfast enrolled 1570 students in 1934-35.

Production. Agriculture and manufacturing are the chief occupations. Production of the chief crops in 1934 was (in tons): Potatoes, 922,908; turnips, 517,557; oats, 274,254; flax, 3677; hay, 805,466. Livestock in June, 1934, included 698,290 cattle, 474,266 sheep, 295,402 swine, 84,705 farm horses, 7478 asses. Poultry numbered 10,290,000. Farm land was distributed among 97,489 holders. About 2000 persons were engaged in mining. The chief industries are flax spinning and weaving (the linen industry has more than 800,000 spindles and 60,000 employees), ship building, distilling, fruit preserving, food canning, milling, and the manufacture of textile machinery, tobacco products, wearing apparel, etc. Herring fishing is important. Commerce statistics are included in those for Great Britain (q.v.).

Finance. For the fiscal year ended Mar. 31, 1935, revenues of the Northern Ireland Government totaled £12,127,000 (£11,930,000 in 1933-34) and expenditures were £12,119,000 (£11,911,000 in 1933-34). The figures include the cost of Imperial defense and of Northern Ireland services reserved to the British Parliament. Budget estimates for 1935-36 were: Receipts, £12,552,000; expenditures, £12,534,000.

Communications. The railways in 1934 had 755 miles of line, which linked up with the railways of the Irish Free State (q.v.). There were 12,996 miles of highways and a number of navigable waterways (including 180 miles of canals). The Northern Ireland Parliament in 1935 established the Road Transport Board to take over all road transport undertakings and to provide for the complete coordination of all highway and railway traffic.

Government. Northern Ireland exercises autonomy through a Parliament, consisting of a Senate of 24 elected and 2 *ex officio* members and a House of Commons of 52 elected members. It also forms an integral part of the United Kingdom, sending 13 representatives to the British House of Commons. Governor in 1935, the Duke of Abercorn, who was reappointed for a third six-year term in July, 1934. Prime Minister, Viscount Craigavon.

History. A new and serious outburst of religious rioting in Belfast during 1935 rendered more complex and seemingly more insoluble than

ever the difficult problem of Ulster's future relationships with the Irish Free State and Great Britain. Tensions in Northern Ireland between Protestants and Catholics and between Unionists and Nationalists had been growing more acute as a result of the Anglo-Irish trade war and the attitude of both the Irish Free State and British Governments. Early in 1935 both President de Valera and Vice President Sean T. O'Kelly of the Irish Free State reiterated their government's determination to incorporate Ulster in a united Ireland and to break off all ties with the British Commonwealth at the earliest opportunity. To the resentment aroused in Ulster by these tendencies was added the fear that the British Government would reach a secret agreement with the Free State and present it to Northern Ireland as a *fait accompli*.

Lord Craigavon, the Ulster Premier, answered these threats and rumors in April as follows: "Some British Government might possibly possess the power to kick us out of Britain, but they could never kick us out of the empire into the Free State or into a Southern republic."

The annual celebration by Protestant societies on July 12 of the anniversary of the Battle of the Boyne, in which William of Orange defeated the Catholic James II, fanned the deep-seated antagonisms to a flame. Groups of Orangemen and Catholics clashed in the streets of Belfast and mobs of rioters were soon engaged in a fierce battle in which stones, clubs, and firearms were freely used. Despite the efforts of the police and of troops, the Catholic quarter in Belfast was invaded by Protestants who burned or wrecked Catholic dwellings and forced about 3000 Catholics to flee to the homes of friends or to unfinished houses on the outskirts of the city. Before quiet was restored on July 19, nine persons had been killed (eight Protestants and one Catholic), scores had been seriously injured, and claims for damages amounting to nearly \$500,000 were lodged with the municipality. See IRISH FREE STATE under *History*.

IRISH FREE STATE. A self-governing unit of the British Commonwealth of Nations. Capital, Dublin.

Area and Population. With an area of 26,601 square miles, the Free State had an estimated population in 1934 of 3,013,000 (2,971,992 in 1926). About 30 per cent of the population was in towns of over 2000. Living births in 1934 numbered 57,841; deaths, 39,112; marriages, 14,158; overseas emigration, 1178. Populations of the chief cities in 1926 were: Dublin, with suburbs, 418,981 (424,000 in 1934); Cork, 78,490; Limerick, 39,448; Waterford, 26,647. The 1926 census showed 2,751,269 Roman Catholics and 220,723 Protestants.

Education. Education is compulsory and there is practically no illiteracy. Attendance in elementary schools in 1933-34 was 502,661; secondary, 32,384; university, 3540. Higher education is provided by Trinity College, Dublin, and by the University of Ireland, with constituent colleges at Dublin, Cork, and Galway.

Production. In 1933 a total of 3,699,000 acres, or 22 per cent of the total area, was under crops; there were 7000 acres of orchards, 8,003,000 acres of meadows and pasture, and 244,000 acres of forest. Production of the chief crops in 1934 was (in thousands of units): Wheat, 3803 bu.; rye, 67 bu.; barley, 6779 bu.; oats, 39,262 bu.; potatoes, 94,999 bu.; turnips, 2793 long tons; sugar beets, 484 long tons; mangels, 1617 long tons; hay, 4338 long tons;

flax, 997 lb. Beet sugar production in 1934-35 totaled 75,000 long tons. Livestock statistics for 1934 were: Cattle, 4,086,000; sheep, 2,931,000; swine, 968,000; horses, asses, and mules, 635,000. The sea-fish catch in 1934 amounted to 13,908,000 lb., valued at £127,771; shell-fish, £36,111.

A total of 248 new companies were registered during 1934, bringing the number in existence to 2289 with a nominal capital of £60,363,425. The production of electricity in 1933-34 was 138,503,000 kilowatt-hours; of malt liquor (1933), 1,798,000 bbl.; of distilled spirits (1934), 776,000 proof-gallons. In 1931 the net value of industrial production was £25,630,702. The principal industrial lines were the manufacture of flour, bread and biscuits, dairy products, margarine, brewed and malted beverages, sugar, confectionery, tobacco products, etc.

Foreign Trade. Imports of merchandise in 1934 were valued at £39,065,849 (£35,789,153 in 1933) and exports at £18,253,526 (£19,069,219 in 1933). In U. S. gold dollars (conversions made on basis of depreciation of pound sterling from gold), the imports totaled £117,432,000 in 1934 (\$118,584,000 in 1933) and exports were \$54,870,000 (\$63,184,000). Leading 1934 imports were (in 1000 gold dollars): Wheat, 8113; coal, 7177; iron and steel, 6353; machinery, 5734; tea, 4745; corn, 4489; timber and lumber, 3756. The principal exports were (in 1000 gold dollars): Cattle, 12,799; porter, beer, and ale, 12,728; butter, 3997; bacon and hams, 3693; horses, 2982. General imports from the United Kingdom totaled \$72,358,000 (gold) in 1934 (\$76,036,000 in 1933) and exports to the United Kingdom were worth \$44,609,000 (\$52,152,000 in 1933).

Imports during 1935 totaled £37,328,000 and exports were £19,614,000. United States statistics for 1935 showed imports from the Free State of \$583,980 (\$683,549 in 1934) and exports to the Free State of \$7,260,396 (\$7,179,818 in 1934).

Finance. Net ordinary revenues for the fiscal year ended Mar. 31, 1935, totaled £28,771,000 (£30,229,000 in 1933-34) and expenditures were £31,203,000 (£31,550,000 in 1933-34). The public debt on Mar. 31, 1934, totaled £49,572,911, but government assets amounted to £25,070,778, leaving a net debt of £24,502,133. The Irish Free State pound (par value, \$4.8665) was linked to the pound sterling through convertibility into British legal tender. The average exchange rate was \$4.2179 in 1933 and \$5.0393 in 1934.

Communications. The Free State railways, with 2999 miles of line, during 1934 carried 20,534,000 passengers and 3,405,000 long tons of freight. Motor roads extended 5057 miles. There were 650 miles of navigable rivers and canals. During 1934 a total of 10,378 vessels of 8,726,000 net register tons entered the ports and 10,380 vessels of 8,715,000 tons cleared.

Government. The Irish Free State became a coequal member of the British Commonwealth of Nations under the Constitution of Dec. 6, 1922. Irish and English are the official languages. The Legislature (Oireachtas) consists of the King, represented by the Governor-General, the Chamber of Deputies (Dáil Eireann) of 153 members elected for five years by popular suffrage under proportional representation, and the Senate (Seanad Eireann) of 60 members elected for nine years by the members of both houses of the Legislature in joint session. The President of the Executive Council is chosen by the Dáil and in turn nominates other members of the Council, or cabinet, who

must be approved by the Dáil. President and Minister of External Affairs in 1935, Eamon de Valera. Governor-General, Donal Buckley. Other members of the cabinet in 1935 were: Vice President and Minister for Local Government and Public Health, Sean T. O'Kelly; Lands, Senator Joseph Connolly; Industry and Commerce, Sean F. Lemass; Finance, Sean MacEntee; Agriculture, Dr. James Ryan; Defense, Frank Aiken; Education, Thomas Derrig; Justice, Patrick Rutledge; Posts and Telegraphs, Gerald Boland.

HISTORY

Internal Politics. Eamon de Valera continued to ride the turbulent seas of Free State politics with consummate skill and sagacity during 1935. By the close of the year the sole check on his power was the recalcitrant Senate, in which former President Cosgrave's United Ireland party retained a slight majority. With the abolition of the Senate scheduled for early in 1936, President de Valera appeared to stand on the threshold of a benevolent but virtually absolute dictatorship. There was little doubt that he retained the support of a majority of the voters and it was the consensus that he would probably control the Free State's destinies for at least another five years.

The split within the United Ireland party's ranks, which in 1934 ended the most serious threat to de Valera's power, continued unhealed throughout 1935. Gen. Owen O'Duffy, organizer of the semi-Fascist Blue Shirts and deposed leader of the United Ireland party, in May, 1935, organized his faction of the Blue Shirts into the National Corporate party, with a frankly Fascist programme aiming at the establishment of a corporative state on the Italian model. His following was relatively unimportant. The remnants of the Blue Shirts under Comdt. Edward Cronin functioned as an adjunct of the United Ireland party, of which Cosgrave was re-elected President early in 1935. The United Ireland party stood for Free State membership in the British Commonwealth and the termination of the Anglo-Irish economic war, which broke out in 1932 when the de Valera Government withheld land annuities due the British Government.

By breaking openly with the Irish Republican Army in June, 1935, arresting and imprisoning many of its leaders, and committing himself to strictly constitutional methods, de Valera deprived the United Ireland party of its most potent political appeal. In September his support of League sanctions against Italy caused a new split in the ranks of the Cosgrave adherents, some of whom denounced the President for failing to obtain compensation from the British in return for his support at Geneva. Frank MacDermott, an influential member of the United Ireland party, resigned in protest at these attacks upon what he termed the correct attitude of Mr. de Valera on this issue. De Valera defended his position on sanctions as being designed to maintain the League of Nations intact as the guardian of the rights of small nations. The anti-Italian sanctions were approved by the Dáil on November 8 with but two dissenting votes, despite the protests of Irish clergymen in Rome.

While these developments strengthened de Valera's position among the conservatives, they increased the antagonism of the radical wing of the I.R.A. Moderate republicans were content with the steady progress Mr. de Valera was making in severing Anglo-Irish ties, but the radicals denounced him for his failure to declare a republic immediately. The growing tension between the President and

his former allies came to a head in connection with a strike of Dublin street car and bus drivers, which tied up traffic in the capital for a period of 11 weeks and was ended on May 17 with a victory for the strikers. On March 24 the I.R.A. Council formally offered to join forces with the strikers in view of the government's action in providing the Free State army trucks for passenger transportation in Dublin. The I.R.A. denounced this as using the army for "strike-breaking purposes."

President de Valera met this defiance with unexpected firmness. About 80 leaders of the republican movement were arrested on March 26 and sentenced to prison under the Public Safety Act passed by the Cosgrave Government. The republican news organ was suppressed and continued arrests and imprisonments of party members forced many into hiding in the hills. The Republican Army remained a formidable threat, however. Consisting of some 30,000 active members, it was reported to be well armed and trained. With the defection of its conservative wing, the Republican movement assumed increasingly a class rather than a nationalistic aspect. The Republican Congress, newly organized political branch of the I.R.A., declared itself for a workers' and farmers' republic, under Marxian leadership.

Another source of opposition to de Valera was the cattle growers and horse breeders whose market in Britain had been greatly curtailed by the Anglo-Irish tariff war. These producers and other farmers whose prosperity was being undermined by Mr. de Valera's policy of economic self-sufficiency joined in a movement for non-payment of land annuities to the government. Efforts of the police to force payment of the annuities led to some riots and clashes, although on a smaller scale than in 1934.

The opposition of these relatively weak and mutually antagonistic groups did not deter President de Valera from moving steadily towards his major objectives—the creation of an economically self-sufficient nation and complete independence from Great Britain. Behind one of the highest tariff walls in Europe many new industries were established to provide manufactured articles formerly imported from Britain and other industrial countries. At the same time much land formerly devoted to livestock raising was planted to wheat and sugar beets, and this, together with the establishment of flour and sugar mills, ended the Free State's dependence upon outside sources of supply for these important foodstuffs. New factories for stoves, bricks, shoelaces, razor blades, cigarettes, etc., were also designed to provide employment for Ireland's idle workers and farmers. Yet the Free State statistics for the number of applicants for work registered showed a steady rise from an average of 62,817 in 1932 to 72,255 in 1933, 103,671 in 1934, and 133,214 for the first half of 1935.

Another result of de Valera's economic policy was the high cost of commodities, making the Free State one of the most expensive countries in Europe to live in. This double burden of high taxes and high tariffs fell most heavily upon the middle classes, but in the main they bore it without great protest as a sacrifice needed to secure economic independence. The tariff war with Britain had a disastrous effect upon foreign trade. The value of foreign commerce had fallen some 60 per cent in four years, while the excess of imports over exports had nearly doubled. In 1935, however, the value of exports increased while imports declined. The Minister of Finance justified the higher taxes levied on tea, sugar, foreign wheat, tobacco, and movie tick-

ets in the 1935-36 budget on the ground that more revenue was needed to withstand the strain of the tariff war with Britain. Despite this and the deficit of nearly £2,500,000 in the 1934-35 budget, the conversion of a £7,000,000 loan from 5 to 4 per cent in November was greatly oversubscribed.

Constitutional Revision. Mr. de Valera was at work during much of the year on plans for a thorough-going revision of the Constitution. The reforms contemplated the merging of the offices of Governor-General and President of the Executive Council to eliminate the last symbol of British dominion, and the replacement of the Senate with a new upper chamber composed of representatives of the major economic, industrial, and agricultural interests. The new Senate, however, was to be shorn of the veto power and was to be mainly an advisory and deliberative body, with certain rights of revising the legislation submitted to it.

After the Senate in May had vetoed a bill reducing the time within which it might delay action on government legislation, the President renewed his campaign for abolition of the upper chamber. His motion to that effect was carried by the Dáil on December 12 for the second time. Under the Constitution, the resolution was to go into effect within 60 days, regardless of the Senate's action in again vetoing the proposal.

Anglo-Irish Relations. The revision of the Free State Constitution was a problem closely related to the question of Anglo-Irish relations, since the Constitution of 1922 was complementary to the Anglo-Irish treaty of Dec. 6, 1921, and had required the approval of both the British Parliament and the Free State Provisional Parliament. It was reported on good authority that although the new Constitution was designed to end all evidences of British overlordship it was nevertheless being framed in consultation with British government officials. At the close of 1935 sources close to President de Valera reported that the negotiations for a settlement of all Anglo-Irish issues were on the verge of success.

The terms of this agreement, as forecast by the Dublin *Independent* late in November, included a republican form of government for the Free State, treaty associations with the United Kingdom, some form of federal association of the Free State and of Northern Ireland with mutual local autonomy, the evacuation of the British naval bases at Queenstown (Cobh) and Berehaven, and the creation of a Free State navy through the sale of about 10 warships by Britain for about £5,000,000. Although this report was officially denied by the de Valera Government, it was believed that it contained the basic proposals on which negotiations were proceeding.

A number of encouraging steps towards a rapprochement earlier in the year raised the hopes of those in both countries who desired a mutually satisfactory settlement of the costly economic warfare. It was announced on Jan. 3, 1935, that an informal understanding had been reached whereby the Free State would buy all of its coal from Britain in return for a larger British quota on imports of Irish cattle. This agreement was ratified by the Dáil in June, although not without strong criticism. It promised to restore to the former level the interchange of coal and cattle. Between 1931 and 1934 Free State imports of British coal had declined from 2,500,000 to less than 1,000,000 tons while the number of Irish cattle shipped to Britain declined from 800,000 to less than 400,000.

The adoption in April of the Irish Nationality and Citizenship Act, 1935, and the Aliens Act, 1935,

severed another relationship with the Empire. The significance of the Aliens Act with regard to the British Commonwealth was modified considerably by the de Valera Government's simultaneous issuance of an order exempting the citizens, subjects, or nationals of the Commonwealth from its restrictive provisions. These restrictions prohibited the ownership by aliens of certain types of property, such as ships of Irish registry.

Another important step towards a settlement was the ruling of the British Privy Council on June 6 that under the Statute of Westminster the British dominions were no longer subject to British law. Consequently the treaty of 1921 and the related Constitution of 1922 could be abrogated at will by the Free State Parliament. The highest British Court thus concurred in the assumption upon which Mr. de Valera had been proceeding. A few days later the Free State President gave assurances that in case the Free State received its full independence, it would never be used as a base of attack against Britain in time of war between Britain and foreign nations.

With the development of the Italo-Ethiopian crisis, the British were faced with the urgent desirability of putting their relations with the Free State in order and their disposition to do so was furthered by President de Valera's sturdy support of the League, and incidentally of Britain, against Italy at Geneva. Consequently the replacement of J. H. Thomas by Malcolm MacDonald as Dominions Secretary in the British Cabinet on November 22 was regarded in Dublin as a friendly and significant gesture. Mr. Thomas had found it difficult to establish an amicable basis of negotiation with the Free State representatives.

See IRELAND, NORTHERN, and GREAT BRITAIN under *History*.

IRON AND STEEL. The iron ore mined in the United States in 1935, exclusive of ore that contained 5 per cent or more manganese in the natural state, was estimated by the United States Bureau of Mines at 30,484,000 gross tons, an increase of 24 per cent as compared with the quantity mined in 1934. The ore shipped from the mines in 1935 was estimated at 33,308,000 gross tons valued at \$82,864,000, an increase of 29 per cent in quantity and 25 per cent in total value compared with the figure for 1934.

The average value of the ore per gross ton at the mines in 1935 was estimated at \$2.49; in 1934 it was \$2.58. The stocks of iron ore at the mines, mainly in Michigan and Minnesota, decreased 26 per cent from 10,340,690 gross tons in 1934 to 7,616,000 tons in 1935.

During 1935, U.S. imports of iron ore amounted to 1,492,435 tons valued at \$3,482,438 (1,427,521 tons valued at \$3,307,504 for 1934); U.S. exports of iron ore amounted to 678,553 tons valued at \$1,913,463 (608,922 tons valued at \$2,243,066 for 1934). These statistics of imports and exports were compiled from the records of the Bureau of Foreign and Domestic Commerce.

The production of pig iron in the United States in 1935, as reported to *The Iron Age*, aggregated 21,007,802 tons as compared with 15,911,188 tons in 1934. The year closed with a production of 2,106,453 tons in December, the highest output for the year, against 1,027,622 tons in the same month of the previous year. The *American Metal Market* composite price for the year averaged \$19.37 a ton, closing the year at \$19.36. The estimate of world production in 1935, as compiled by the German economic group "Iron and Steel In-

dustry," was 73,300,000 metric tons, as compared with 62,900,000 metric tons in 1934. For the leading producing countries other than the United States, the estimates were: Germany, 12,800,000 metric tons; Russia, 12,470,000 metric tons; Great Britain, 6,520,000 metric tons; France, 5,800,000 metric tons; Belgium, 3,040,000 metric tons; Japan, including Korea and Manchuria, 2,690,000 metric tons; Luxembourg, 1,850,000 metric tons. The production of entire Europe was estimated at 46,210,000 metric tons.

Steel production in the United States, including both electric and crucible ingots, was estimated by *American Metal Market* at 33,800,000 gross tons, a gain of about 30 per cent over the 26,055,000 tons produced in 1934. A statement of conditions in the United States during the year by Walter S. Tower, Executive Secretary of the American Iron and Steel Institute, is thus reported, in part, in *American Metal Market*:

The termination of the Steel Code in May, following the Supreme Court's decision, and the sustained recovery of demand and output which began in July, were two developments of outstanding importance in the steel industry in 1935.

Any early fear that the ending of the Code would have an adverse effect on steel mill activities or employment soon disappeared. Actually, production of steel ingots in the last half of the year exceeded that of the first six months by almost 9 per cent.

One factor making for improvement in the closing quarter was the advance in the date for introducing new automobile models and the increase in automobile production which resulted.

Operations for the year served for the first time in five years to take the industry out of the red. However, with activities still limited to approximately one-half capacity, net profit margins continue to be uncomfortably narrow.

Although the rate of operations has failed to get back to a satisfactory level, the number of persons on the payroll has reached a total close to the top which marked the peak years of 1928-29. In October, the latest month for which figures are available, 436,500 persons were employed in the iron and steel mills, compared with 381,400 in October, 1934, and with a low point of 210,000 in 1932. Total payrolls for the year are estimated at \$550,000,000 compared with \$457,843,000 for 1934.

The average hourly wage rate in the industry during the year was 65.5 cents or approximately 10 per cent higher than the average for all other industries, and 38 per cent higher than in June, 1933. Because of the continued below-normal activities, the large number of employees on the payrolls reflects the extent to which work sharing was still a factor in the industry in 1935. Average weekly earnings of employees for the year increased 20 per cent over 1934, but as a result of limitation on hours, they still remained below 1929 levels.

As reported by the United States Bureau of Foreign and Domestic Commerce, the United States established a new post-war record in the export of iron and steel in the shipment of 3,067,336 gross tons, higher by 29,479 tons than the 1929 total. Some 69 per cent of the shipments was made up of iron and steel scraps—2,107,814 tons. The Far East, chiefly Japan, was the heaviest buyer for the year, with 46 per cent of the total, or 1,413,519 tons, of which about 1,200,000 tons were scrap. Imports for the year aggregated 469,954 tons, higher by 48 per cent than in 1934.

World steel production, as estimated by the German "Iron and Steel Industry," totaled 98,200,000 metric tons, a gain of 18.7 per cent over the 82,700,000 metric tons produced in 1934. Leading producing countries following the United States are: Germany, 16,400,000 metric tons; Russia, 12,100,000 metric tons; Great Britain, 10,200,000 metric tons; France, 6,200,000 metric tons; Japan, including Korea and Manchuria, 4,500,000 metric tons; Belgium, 3,000,000 metric tons; Italy, 2,200,000 metric tons; Luxembourg, 1,800,000 metric tons; Czechoslovakia, 1,170,000 metric tons. Preliminary official figures from London, however, show the total output of the United Kingdom at

9,842,400 tons, a new all-time high record. Canadian steel production for 1935 rose to 935,682 tons from the 1934 level of 656,695 tons.

ISOTOPES. See **CHEMISTRY.**

ITALIAN ART. See **ART EXHIBITIONS.**

ITALIAN LITERATURE. The 1935 season was accentuated by elaborate celebrations of the Carducci centenary (1835-1935). Despite the fact that this lion-hearted classicist has fallen somewhat into discard among some of the Italian intellectuals under contention that his fame has surpassed his genius, he has had, none the less, a vigorous and enthusiastic following. His name and creation have assumed renewed importance vis-à-vis of the fact that the Fascist régime sees in him a poet consonant with the ideals of modern Italy. His creation embodies the aspiration for a strong and vigorous Italy, politically and culturally: it needs but to look back into its glorious history for its lessons to emerge enlightened and vitalic. Parallely, the aspirations of Fascist Italy are to emerge in a strong and dignified nation worthy of her splendid heritage and noble traditions. Bearing in mind that this reciprocal aspiration is the emotive factor, small wonder, then, that Fascist Italy should hail Carducci as her own and find justification in the widespread celebrations. The commemorating festivities, regardless of the value one may attach to them, have been productive of various volumes on the poet, notable among which is Giovanni Papini's study. These volumes will be discussed in more appropriate premises below.

Fiction. In which direction is the cult for literature turning? It is a foregone conclusion that interest in literary creations is visibly on the wane everywhere. Italy alone does not suffer from this organic disturbance. Where is that feverish interest that not so long ago the public in Italy showed toward literary production? Think of the stir that the novels of Fogazzaro, Verga, D'Annunzio created. And, if this interest is vanishing, what are the deducible factors? Has literary creation become less potent? Or could one at this moment inject the sinister accusation that literary formulae have in some measure alienated the public? Or could it be said also that the public, by and wide, subjected to life's more accelerated tempo has yielded more to the pleasurable rhythm offered by sports, the automobile, the cinema, and the radio?

How much subversive influence can be attributed to these factors is disputable, yet to make light of them would seem unreflective. The public in general has, perforce, not only failed of late to renew reasonable interest in literature, but has actually showed impatience to genres which in the past decade have assumed complex formulae. Before proceeding with this discussion it would obviously be better to qualify the definition of general public. Granting that the intellectuals set off the standard for literary consumption, it follows that the public rallying about this standard falls into various classes,—the well-educated, the quasi-intellectual, and the individual of moderate instruction. The man of education or the quasi-intellectual reads for whatever enlightenment and esthetic enjoyment he can extract from a literary creation, whereas the man of limited instruction reads principally for enjoyment. No inclusion is made in these groups of the type of person whose elemental education has not elevated him beyond the possibility of reading the putrid and infectious trash, written expressly for him.

The intellectual, then, who constitutes a negli-

gible minority, is the only one who may be considered a staunch and steady consumer of literary creations. The other categories of readers, not having this deep-rooted affinity for literature, may increase or decrease variably with external influences and internal changes in criteria for artistic creations. In the past 15 or 20 years criteria as regards a work of art has not been conducive to production of universal appeal. Rather, the appeal has been limited to a sort of intellectual aristocracy. In point of fact, contemporary creation has tended to alienate its general public. When a literature becomes too introspective, too moody, too analytical, or, if you will, too metaphysical, is the public to be condemned if it reads less and turns more towards sports, the cinema, the radio for its leisure hours?

Contemporary literature had better look to a more composite structure, assume a loftier objective. It should offer less problems, less cerebration, but more dignity, more esthetic values, and, if one may be so bold, let it offer more interest. Otherwise it may estrange even the more intelligent type of reader. Obviously, the world economic crisis and political unrest are also disturbing factors, yet, constituting as they do so common a denominator throughout the world, they can be summarily dispensed with in this discussion. The foregoing observations will facilitate the study of Italian prose creations which follow.

A novel of considerable importance, not of the moody or subjective variety, is to be found in young Alberto Moravia's *Le ambizioni sbagliate* (*Mistaken Ambitions*; Milan). Moravia has progressed in more ways than one since he put out his sensational *Gli Indifferenti* (*The Indifferent Ones*) in 1929. He has injected in his writing a style with subtle analysis and delicate coloration. There is in evidence a more compelling force which drives the characters of *Mistaken Ambitions* hopelessly and inevitably to tragedy. Nevertheless this progress on the part of the author has been rather in the direction of form and composition and toward a definite sense of finality which his previous creation lacked.

Notwithstanding these admirable qualities, the novel has an organic ailment: the author persists in his thesis of sordid immorality to which all his characters succumb. Does young Moravia see nothing else in life except all this sordidness? No rule is implied here that Moravia should not depict the repulsive side of life. Rather, he should observe it with theme and attitudes slightly reversed perhaps. If Mr. Moravia must insist on his note of condemnation, despair, and futility as regards morality in general, then let this viewpoint contain its element of dignity and let it lead to some worthier end: not every ship is without rudder at the mercy of a tempest, nor every human life a piece of wreckage caught in a mountain torrent.

If Moravia leaves one somewhat cold and bewildered, Bonaventura Tecchi creates quite an opposite atmosphere in *Villatauri* (Milan), a meritorious novel dealing with the mental rehabilitation of Guido Villatauri, the last of his line. Guido, a young man brought up in mortal fear of an overbearing father, suffers for years from complex inhibitions and distorted psychological perspectives. Guido is on the verge of succumbing to a fatal nervous derangement, to certain death, where his brother has preceded him, when with the passing of his father, he emerges as if reborn, gathering strength and fortitude of char-

acter as he assumes his duties and takes his place in life as a man of courage and conviction. There is something wholesome and convincing about this novel which, in spite of a somber theme, rises to stateliness with hope and encouragement the dominant notes. This type of novel, to be sure, is more healthful and is to be preferred to the hopelessly introspective and broody variety of which Italy has had her share. Tecchi is to be congratulated for adhering to the fundamental principles of novel composition. His scenes in town and country are refreshing, indeed, and the moral in which the novel is couched indicates that from abjection and weakness the individual can rise to strength and morality (a reversal of the Moravian formula in which dissolution and utter collapse accompany the dénouements).

Carlo Linati uses a country setting for his novel, *Cantalupa* (Milan). Notwithstanding Linati's skill as narrator, it must be said that as yet he has not succeeded in giving the public a novel of architectonic proportions and characterizations of length and breadth. To be sure, Linati delineates with interest, and yet his characters seem to lack red blood of the palpitating variety. That an artist chooses to delineate ordinary human beings is his prerogative. But this is where art and genius comes in: it is not so much a matter of the type of character selected but the manner in which he is painted on the canvas that makes him stand in relief. *Cantalupa*, episodic and lacking organic plasticity, as a whole, is the story of an intelligent young man of multiple capacities, moderate ambitions, and of no outstanding achievements. He represents, in short, the well-to-do young man of the transitional period of the past century (1890-1915),—a period in which the novel is couched. The episodes undoubtedly contain reminiscences of the author's youth. That the novel possesses charm and serenity is undeniable, and yet, it ends with little to stimulate the imagination, but leaves much to be desired.

In *Auime in cammino* (Milan), Gino Vitalba gives a popularized version of the life of Christ and his Disciples. This type of literary treatment of a sacred or quasi-sacred topic seems always destined to have a small, but enthusiastic following. The author has developed his story with sincerity and directness—qualities which both the devout and the learned reader can enjoy. This story of Christ, far from being formalized, has all the elements of human love and broad interests. Even the religiously formal episodes of the Miracles, the Sermons, Mary Magdalene's Conversion, the Scourge, the Crucifixion, have their simple but sympathetic narration. To those especially whose religion is remote and nebulous, this novel must have been unconsciously dedicated. It may have a limited public, yet it is a book which will stand on its merits.

Orsini Ratti chooses a musical setting for his novel, *Giovanna da Milano* (Milan), which revolves about a girl singer and various musicians. Unfortunately, the plot, if it may be called one, spins about trivial and commonplace incidents in the lives and aspirations of three or four characters. Every indication in the novel points to the futility of a musician's efforts to carve a name for himself in the musical circles of this day and age.

Of two novels written by women authors, the first, *L'Argine* (Milan) is the story of a lonely man's unrequited love for a middle-aged widow. The story does not measure up to the usual intensity and interest of the Deleddian novel. (Grazia Deledda, be it recalled, was recipient of the Nobel

Prize in Literature some seasons back.) For the most part, the novel is composed of a series of letters, in which the protagonist, Franco Franci, relates his activities in a town where he endeavors to make a fresh start in life. Marise Ferro, the other woman writer, although a youngster compared to Deledda, contributed as her novel of the year, *Barbara* (Milan). Several years ago her talent was discovered in a literary prize-competition (Mondadori Academy) in which she was "runner-up." It is to be noted that her *coup d'essai*, *Disordine*, though a novel of absorbing interest, lacked a certain amount of maturity and background. How much progress can be conceded to Miss Ferro in this new creation? There is still lacking in her work a more absorbing portrayal of life with its pathos, its dignity or indignity. *Barbara* is a finely worked-out analytic sketch of a girl and her friendship for Victoria, the second heroine of the novel, yet it lacks *materia prima*, the flesh and bone, as it were, that is a prerequisite for a novel of merit.

In the short story output first mention should be made of benign Francesco Chiesa, poet and author, hailing from the Italian-Swiss Ticino. *Racconti puerili* (*Youthful Stories*, Milan), fancies and reminiscences of his own youth perhaps, are delicately interwoven with poetry and benevolence. The collection of stories, soberly treated, are commendable to the young, and to the grown-up, too, if he has a feeling for grace and tranquillity. Luigi Chiarelli better known for his memorable contribution to the "Grotesque Theatre," *The Mask and the Face*, took time out from the theatre to assemble *La mano di Venere* (Lanciano). These are stories in the provocative and abstract moods, reëchoing his grotesque and paradoxical outlook on life. Alberto Moravia in addition to his long novel found time to put out a volume of short stories, *La bella vita* (Lanciano), some of which date back to 1928. The stories are somewhat disappointing. The fault lies within the subject matter: it is the ever-recurrent theme of lover and mistress, both inevitably smitten with nausea and morbidity.

Poetry. The Italian Academy Prize of 50,000 lire was recently awarded to Ada Negri, the dean of women poets. It is now over 40 years since the appearance of *Fatalità*, during which time it has been perhaps the most popular volume of poetry. The vogue of *Fatalità* must be attributed chiefly to its sentimental strain, which, admitting all possible objections, has a sense of refinement. Her volume of poems of recent date, *Vespertina* (Milan), has been republished. Though the leitmotif contains strains of various schools of poetry, there is ever-present sincerity and autumnal reflection. It can be said that from the obvious sentimentality of *Fatalità* and other volumes, Ada Negri, in *Vespertina*, has passed to a delicate and artistic outlook on life which she views with Olympian serenity. The extract below should best exemplify this point:

"Saluta all'alba il ritornante sole
come il più grande bene a te concesso,
o creatura: del sentirti in vita
ringrazia il giorno: il dolor vecchio e il nuovo
riprendi al lato, pallidi compagni
ma forti, e dolci senza sapienza
che sol viene dal pianto; e va con Dio
per la tua strada. . . ."—(*Preghiera dell'alba*, p. 16).

Margherita Sarfatti, better known internationally for her *Life of Mussolini*, reassembled some of her poems and added new ones to *I vivi e l'ombra* (*The Living and the Shadow*, Milan). The verses

are marked with overtones of sensitivity and emotions; the "thought is progressive and modern." One must turn to Trilussa for poetry in the comique vein. He calls his last book a mute one, *Libro muto* (Milan), a collection of fables in Roman dialect, which under guise of hilarity, contain all the wisdom and eloquence of a philosopher. Giovanni Pascoli's *Odi e Inni* (Milan) were republished as the ninth volume in the series "Opere di Giovanni Pascoli." The edition is gotten up in handsome format with notes by Maria Pascoli and Angelo Sodini. The XIX Biennale d'Arte Prize went to Cesare Meano, R. Laurano, and N. Vernieri for their *Liriche d'oggi* (Milan), poems in conservative moods as against the cerebral. P. L. Mariani included some 70 poets in his anthology of contemporary poets, *Poeti del tempo nostro* (Rieti). A *de luxe* and feature volume of poetry (in reality some of the poems of Carducci in the original manuscript reproduction) was prepared by Albano Sorbelli along with his introductory essay, *Poesie di Giosuè Carducci nei loro autografi* (Bologna).

Theatre. Luigi Chiarelli, the innovator of the "Teatro Grottesco," continued along the thesis of *The Mask and the Face* in his latest offering, *Carne bianca* (Lanciano). This time he unmasks the white race as exemplifying decadence and disintegration. Camillo Pellizzi made a careful study of the English theatre and wrote *Il teatro inglese* (Milan). Pellizzi continues in the sober criticism and fine standard he set off in his recent study on contemporary literature, *Le lettere italiane del nostro secolo*. Fascism was the motif of L. Vannata's *L'altra luce* (Trieste). An historical drama in three acts is to be found in *Beatrice d'Aragona* (Piceno), by M. Battistrada and F. Bonnell. Luigi Pirandello's *Così è se vi pare, Tutto per bene, and La ragione degli altri* were republished from his series *Maschere nude*. B. Cellini wrote a brochure on Pirandello's theatre, *Il Teatro di Pirandello* (Rome). The scenery of the early Italian sacred drama was treated by Virginia Galante Garrone in her study, *L'apparato scenico del dramma sacro in Italia* (Turin). Lastly, there was a study on the French theatre by A. Cecchi, *Il teatro francese* (Milan) which contains a preface by Italy's leading dramatic critic, Silvio D'Amico.

Criticism and Varia. The Carducci centenary celebration was fruitful of several volumes, notably among them, Giovanni Papini's study, *Grandezze di Carducci* (Florence). This little volume consists of three essays, "L'umanità del Carducci," originally a lecture which Papini gave at Bologna (Carducci's beloved city); "Carducci alma sdegnosa," also a lecture later published in *Nuova Antologia* (Sept. 1933); and, "Il Carducci Poeta" appearing first in *Scuola e Cultura* (March-Sept., 1935) (See also author's note, p. 15). In these essays Papini has endeavored to give fresh evaluations on the poet without having recourse to the material of his exhaustive study of the poet, *L'Uomo Carducci*, a volume of some four hundred pages. In these three essays one should not look for detailed study and documentary material. The values, rather, lie in the literary and philosophic veins, and in the admiration and the reverence that Papini shows for the poet.

Now, if Papini's essays are to be appraised primarily from the artistic point of view, an essay of considerable research, of penetrating criticism, and extensive documentation is to be found in the study of 122 pages, *Il Grande Artiere*, which serves as a preface to *Prose Scelte* (Selected Prose,

Bologna), by Lorenzo Bianchi and Paolo Nediani. In this study the authors stress these dominant traits in Carducci: *Italianità, sincerità, virilità*. The authors have assembled 350 pages of Carducci's prose-writings of which the articles on criticism and polemics constitute the highlights of the collection. The notes are elucidating. In all, the volume has been decorously put out, the fine paper and the illustrations are a feature.

Two volumes which will reach the general public in spite of being prepared principally as school texts deserve recording here. The first, Massimo Bontempelli's *Oggi* (Today, Milan), contains prose selections from over a hundred authors. The volume of 633 pages is divided into five parts. Book i, *Ieri* (Yesterday) contains prose of the pre-Risorgimento period figuring among its authors, Edmondo de Amicis, Ippolito Nievo, Renato Fucini, Giuseppe Giusti. Book ii, *Risorgimento d'Italia*, is accentuated, in the main, by the prose-writings of Silvio Pellico, Giuseppe Mazzini, Giuseppe Garibaldi, Antonio Fogazzaro, Giosuè Carducci, Alfredo Panzini, and Giuseppe Giaccosa. Book iii, *Intermezzo*, is represented by poems and extracts from Ugo Foscolo, Giacomo Leopardi, Alessandro Manzoni, Giovanni Verga, Luigi Pirandello. Book iv, *La Rivoluzione Fascista*, is made up of extracts from several score of writers of which Gabriele D'Annunzio, F. T. Marinetti, Benito Mussolini, Massimo Bontempelli, Antonio Baldini constitute the vanguard. Book v, *Oggi*, several hundred pages of excerpts, features writings by Ugo Ojetti, Corrado Alvaro, G. A. Borge, Giovanni Papini. The other volume, Demetrio Ferrari's *L'Arte del Dire (Stilistica ed Estetica)* (Milan), could be called in reality a handbook on writing, emphasizing rhetoric, style, and esthetic interpretations of literature. It is to be noted that this is the 11th edition considerably reorganized and revised by Prof. Alfredo Azzoni. The text is accompanied with a very useful compendium of Italian Literature (pp. 190-250) with chapters on the origin of the language, the 13th Century, the Renaissance, the Baroque, the Arcadian, and contemporary periods.

And now, *pêle-mêle*, the following volumes should be recorded. Luigi Tonelli, ever active in literary criticism, completed a rather comprehensive study of *Tasso* (Turin). Salvatore Breglia made a study on the poetry and structure of Dante's creation, *Poesia e struttura nella Divina Commedia* (Genoa). Alfredo Galletti made an historical-literary survey of contemporary literature, *Il Novecento* (Milan). Francesco Flora prepared a *de luxe* edition of the poetry of Torquato Tasso, *Poesie* (Milan). And lastly, there was an augmented and revised edition of the letters of Giacomo Leopardi, *Epistolario* (Florence), with comments by Francesco Moroncini.

ITALIAN SOMALILAND. See SOMALILAND, ITALIAN.

ITALY. A kingdom of southern Europe, upon which a Fascist dictatorship is superimposed. Capital, Rome. Sovereign in 1935, King Victor Emmanuel III, who ascended the throne July 29, 1900.

Area and Production. Italy has an area of 119,759 square miles and a population estimated on Jan. 1, 1935, at 43,096,000 (41,230,047 at the 1931 census). In 1931 16 per cent of the population lived in communes of less than 3000; 33 per cent in communes of from 3000 to 10,000, and 51 per cent in communes of over 10,000. Living births in 1934 numbered 983,254 (995,979 in 1933); deaths, 557,013 (574,113); marriages, 309,152

(289,910); emigrants, 175,740 (194,772); repatriates, 106,975. The number of Italians residing abroad in 1934 was estimated at 9,600,000. Estimated populations of the chief cities in 1934 were: Rome, 1,008,803; Milan, 992,036; Naples, 839,390; Genoa, 608,096; Turin, 597,260; Palermo, 389,699; Florence, 316,286; Venice, 260,247; Trieste, 249,574; Bologna, 246,280; Catania, 227,765; Messina, 182,508; Bari, 171,810; Verona, 152,923; Padua, 131,066; Leghorn, 124,391. According to the 1931 census 99.6 per cent of the population were Roman Catholics; there were 82,481 Protestants and 47,435 Jews.

Education. The 1931 census revealed that 21 per cent of the population over six years of age was illiterate. In 1932-33 there were 4,968,542 pupils in elementary schools, 476,929 in secondary schools, and 51,108 in institutions of higher education. The 21 State and five free universities enrolled 34,094 students.

Production. Of the working population in 1931, 46.3 per cent were engaged in agriculture and fishing, 30.4 per cent in mining, quarrying, and industry, 8.3 per cent in commerce, and 4.6 per cent in transportation. The acreage devoted to cereals in 1934 was 17,966,641; woods and forests, 13,741,230; forage and pasture, 12,184,500; vines, 2,436,400; olive trees, 1,991,620; vegetables, 1,284,920. The chief crops in 1934, with 1933 crops in parentheses, were (in thousands of units): Wheat, 233,036 bu. (298,548); rye, 5607 bu. (6739); barley, 9347 bu. (10,401); oats, 34,297 bu. (39,562); corn, 125,694 bu. (101,988); rice, 30,226 bu. (29,772); potatoes, 99,451 bu. (87,232); sugar beets, 2652 metric tons (2144); wine, 807,021 gal. (872,679); citrus fruits, 2652 metric tons (2144); tobacco, 90,831 lb. (97,842); silk cocoons, 63,618 lb. (75,431). Beet sugar production in 1934-35 was 358,000 metric tons (305,000 in 1933-34); olive oil in 1934-35, 62,839,000 gal. (47,458,000 in 1933-34). Livestock estimates for 1932 were: Cattle, 7,000,000; swine, 3,000,000; sheep, 9,000,000; goats, 1,500,000; horses, 925,000; mules and asses, 1,410,000.

Mineral and metallurgical production in 1934, with 1933 figures in parentheses, was (in 1000 metric tons): Coal, 367 (334); lignite, 388 (383); coke, 593 (730); iron ore, 502 (526); pig iron, 573 (567); steel ingots and castings, 1850 (1771); zinc, 24.4 (23.3); lead, 41.9 (24.8); sulphur, 370 (402). The value of all mineral production in 1933 was 292,801,000 lire; of quarry output, 334,495,000 lire. On Jan. 31, 1935, Italy had 5,473,000 raw cotton-spinning spindles. The hydroelectric plant capacity in 1934 was 3,760,000 kilowatts and the output was 11,560,000,000 kilowatt-hours. The production of raw silk in 1934 was 6,887,000 lb. (7,239,000 in 1933); of rayon, 106,375,000 lb. (81,911,000 lb. in 1933). In 1933 the output of cotton yarn was 420,565,000 lb.; of cotton cloth, 838,396,000 yards. In 1934 46,000 automobiles were manufactured (42,000 in 1933).

Foreign Trade. The trend of Italian foreign trade during the period 1929-35 is shown in the accompanying table based upon the U. S. *Foreign Commerce Yearbook, 1935*. The figures represent imports for consumption and exports of Italian products.

In 1934 Germany supplied 15.8 per cent of the total imports for consumption (14.7 per cent in 1933); United States, 12.5 per cent (15.0); United Kingdom, 9.2 (9.8); France, 5.7 (5.5); Argentina, 3.6 (3.4). Of the 1934 exports Germany purchased 15.9 per cent (12.2 per cent in 1933); United King-

ITALIAN FOREIGN TRADE, 1929-35

Year	Millions of lire		Millions of gold dollars	
	Imports	Exports	Imports	Exports
1929	21,665	15,236	1,140	801
1930	17,347	12,119	912	637
1931	11,643	10,210	607	532
1932	8,257	6,811	424	349
1933	7,432	5,991	386	312
1934	7,667	5,225	392	267

dom, 10.2 (11.4); United States, 7.4 (8.7); France, 6.7 (7.7); Argentina, 4.1 (6.4). Imports from Italy's African colonies in 1934 were \$7,927,000 (\$6,666,000 in 1933) and exports to the African colonies were \$6,208,000 (\$6,986,000). The value of the leading 1934 imports was (in 1000 gold dollars): Coal, coke, and briquets, 43,798; raw cotton, 36,860; machinery, 22,233; iron and steel, 20,620; wool, greasy, 20,176. The value of the chief exports was (in 1000 gold dollars): Fruits and nuts, 18,302; cotton fabrics, 16,040; rayon, raw or dyed, 15,283; rayon fabrics, 10,460; wool fabrics, 10,079; lemons, 9659; cotton yarn and thread, 9622.

United States figures showed general imports from Italy in 1935 of \$38,671,829 (\$35,748,733 in 1934) and exports to Italy of \$72,450,043 (\$64,577,707 in 1934).

Finance. The budget estimates for the fiscal year ending June 30, 1936, placed receipts at 17,988,000,000 lire and expenditures at 19,645,000,000 lire. However, the development of the Ethiopian war during the year made the budget an inaccurate guide to actual financial operations. Preliminary budget returns for 1934-35 showed a deficit of 2,030,000,000 lire on revenues of 18,614,000,000 lire. For 1933-34, the final returns showed receipts of 17,790,000,000 lire; expenditures of 24,609,000,000 lire; and a deficit of 6,819,000,000 lire.

The public debt on June 30, 1935, totaled 105,389,000,000 lire (funded, 93,827,000,000; floating, 11,562,000,000), compared with 102,622,000,000 lire on June 30, 1934. The foreign debt was confined to war debts to the United States and British Governments and to the dollar loan of 1925, of which \$82,033,100 was outstanding June 30, 1935. The par value of the lire previous to dollar devaluation in January, 1934, was \$0.0526; after that date it was \$0.0891. The lire exchanged at an average of \$0.0671 in 1933, \$0.0856 in 1934, and \$0.0825 in 1935.

Communications. Italian railways in 1934 reported 14,313 miles of line, of which 10,568 miles were government owned and operated. There were 2433 miles of electrified lines. During 1933 the government railways carried 81,213,000 passengers and 33,669,000 metric tons of freight (excluding livestock). Gross receipts for the 1932-33 fiscal year were 3,129,000,000 lire. National highways in 1934 extended 12,854 miles and civil airlines 10,350 miles (1933). During 1934 the civil airlines carried 40,090 passengers, 124,518 lb. of mail, 236,000 lb. of newspapers, 1,300,000 lb. of baggage, and 406,830 lb. of merchandise. The Italian merchant marine on June 30, 1935, aggregated 2,884,400 gross tons measurement (2,928,400 on June 30, 1934). During 1934 209,247 vessels of 68,097,000 tons entered Italian ports, their cargoes totaling 21,464,000 tons.

Government. The Fascist régime has been superimposed upon the constitutional monarchy established by the Constitution of Mar. 4, 1848. Under the law of Dec. 9, 1928, the Fascist Grand Council, consisting of (1) life, (2) *ex officio*, and (3) extraordinary members appointed by the head of the government, acts as "the supreme organ co-ordinating and uniting all the activities of the

régime." There is an appointive Senate of some 374 members and a Chamber of Deputies of 400 members nominated by the Fascist Grand Council and elected by restricted suffrage. The Cabinet, as reconstituted Jan. 24, 1935, was as follows: Prime Minister, Chief of the Government, Minister of Interior, of Foreign Affairs, of Colonies, of War, of the Navy, of the Air, and of Corporations, Benito Mussolini; Public Works, Luigi Razza; National Education, Count Cesare Maria de Vecchi; Agriculture and Forests, Edmondo Rossoni; Finance, Paolo Thaon de Reval; Justice, Arrigo Solmi; Communications, Antonio Stefano Benni.

HISTORY

The year 1935 was a momentous one in the history of the Italian people. Starting auspiciously with the Franco-Italian accord of January 7, which ended 15 years of mutual hostility and rivalry, the year closed with Italy engaged in a costly and difficult war of colonial expansion in Ethiopia (q.v.), in which discouragingly slow progress was recorded. Formally branded as the aggressor and subjected to economic boycott by some 53 member States of the League of Nations, Italy was placed under formidable pressure. The already low standard of living of her people rapidly deteriorated and the national economy in general functioned under a terrific strain. Il Duce's bid for "a place in the sun" appeared to have endangered not only the freedom of the last independent native kingdom in Africa but also the stability of the Fascist régime itself and the peace of all Europe.

The Franco-Italian Accord. The breach between Italy and Germany which grew out of Hitler's thinly veiled efforts to Nazify Austria in 1934 bore fruit in the rapprochement of Italy and France. By a series of agreements signed by Premier Mussolini and Foreign Minister Laval of France in Rome on Jan. 7, 1935, France secured Italy's collaboration against Germany in Central and Eastern Europe in return for the settlement on terms favorable to Italy of the African questions which had disturbed the relations of the two Latin powers since the Paris Peace Conference. France and Italy agreed (1) jointly to oppose further Nazi efforts to absorb Austria, (2) to support a multilateral pact by which Austria and its neighbors would undertake to respect their mutual frontiers and refrain from interfering in one another's internal affairs, and (3) to oppose German rearmament unless it was carried out in agreement with the other chief European powers. In Africa France agreed to cede Italy an area of 44,500 square miles in French Equatorial Africa adjoining the Anglo-Egyptian Sudan and a strip of French Somaliland providing Italy with an outlet on the Gulf of Aden. Italian sovereignty over the island of Doumerrah in the Red Sea was recognized by France, who also granted Italy a share in the ownership and management of the railway from Djibouti, French Somaliland, to Addis Ababa, capital of Ethiopia. The long dispute over the status of Italians in the French protectorate of Tunis was ended by granting them, under certain limitations, the right to retain their Italian nationality, to retain Italian schools, and to be admitted to the liberal professions.

This far-reaching agreement promised to have the most beneficial effects in promoting the pacification and rehabilitation of Europe, which since 1930 had been rocked by a series of increasingly grave crises. Whereas France and Italy had pre-

viously egged on their rival satellites in Central and Eastern Europe against one another, they now undertook to smooth out the difficulties obstructing peaceful relations among the Danubian and Balkan States. An important case in point was the temporary reconciliation of Italy and Yugoslavia, whose intense hostility constituted a standing menace to peace. In March Mussolini sent a Minister to Belgrade whose friendly remarks upon the occasion of the presentation of his credentials was hailed as marking a revolution in Italo-Yugoslav relations. Similarly the Franco-Italian accord paved the way for an even more ambitious effort by Britain and France to conciliate Germany and lay the foundations for a "new deal" in Europe. These negotiations were initiated by the Franco-British communiqué of Feb. 3, 1935 (see FRANCE, GERMANY, and GREAT BRITAIN under *History*).

Unfortunately the Franco-Italian understanding of January 7 contained one point which proved its partial undoing and which effectively reversed the favorable trend of European affairs. In addition to the written pledges enumerated above, France and Italy entered into some sort of a secret agreement regarding Ethiopia which later gave rise to conflicting interpretations in Paris and Rome. Mussolini clearly believed that he had obtained a free hand to carry out his plans for the conquest of the black kingdom. M. Laval formally denied he had made such a promise, although the reluctance with which he supported the League in its efforts to stop Italy seemed to belie his words. At any rate Mussolini's "precautionary mobilization" of February 10 and accompanying pronouncements made it obvious that he was determined upon a military adventure in Ethiopia. From that moment his challenge to the collective security system of the League of Nations and to the imperial interests of Britain in the Mediterranean, the Nile valley, and the Red Sea loomed as an increasingly menacing cloud on the European diplomatic horizon. By October 3, when the invasion of Ethiopia commenced, Mussolini's policy had forced Europe into the most acute crisis since the World War and inaugurated a realignment of the European powers scarcely less profound than that caused by the triumph of Hitler's Nazis in Germany in 1933.

The Stresa Conference. During the first half of the year, however, the Franco-Italian accord made possible close collaboration between Britain, France, and Italy in an effort to curb the rapidly growing power of Nazi Germany. Following Hitler's speech of March 16 announcing the restoration of military conscription in defiance of the Versailles Treaty, Italy joined France in presenting strong notes of protest at Berlin. Soon afterwards Il Duce recalled 250,000 men to the colors, while France reinforced the troops on its eastern frontier. Then the heads of the governments of Britain, France, and Italy met at Stresa, Italy, on April 11-14 to discuss a common policy in the face of open German rearmament.

The so-called "Stresa front" arranged for joint opposition to further unilateral treaty repudiation by Germany and reiterated its common support of Austrian independence. The three powers again proposed that the negotiations initiated by France in 1934 for an "Eastern Locarno"—a multilateral treaty mutually guaranteeing existing frontiers in eastern Europe—should be carried to a conclusion. They also urged the conclusion of the Central European or Danubian agreement for the peace-



THE REGION OF THE MEDITERRANEAN

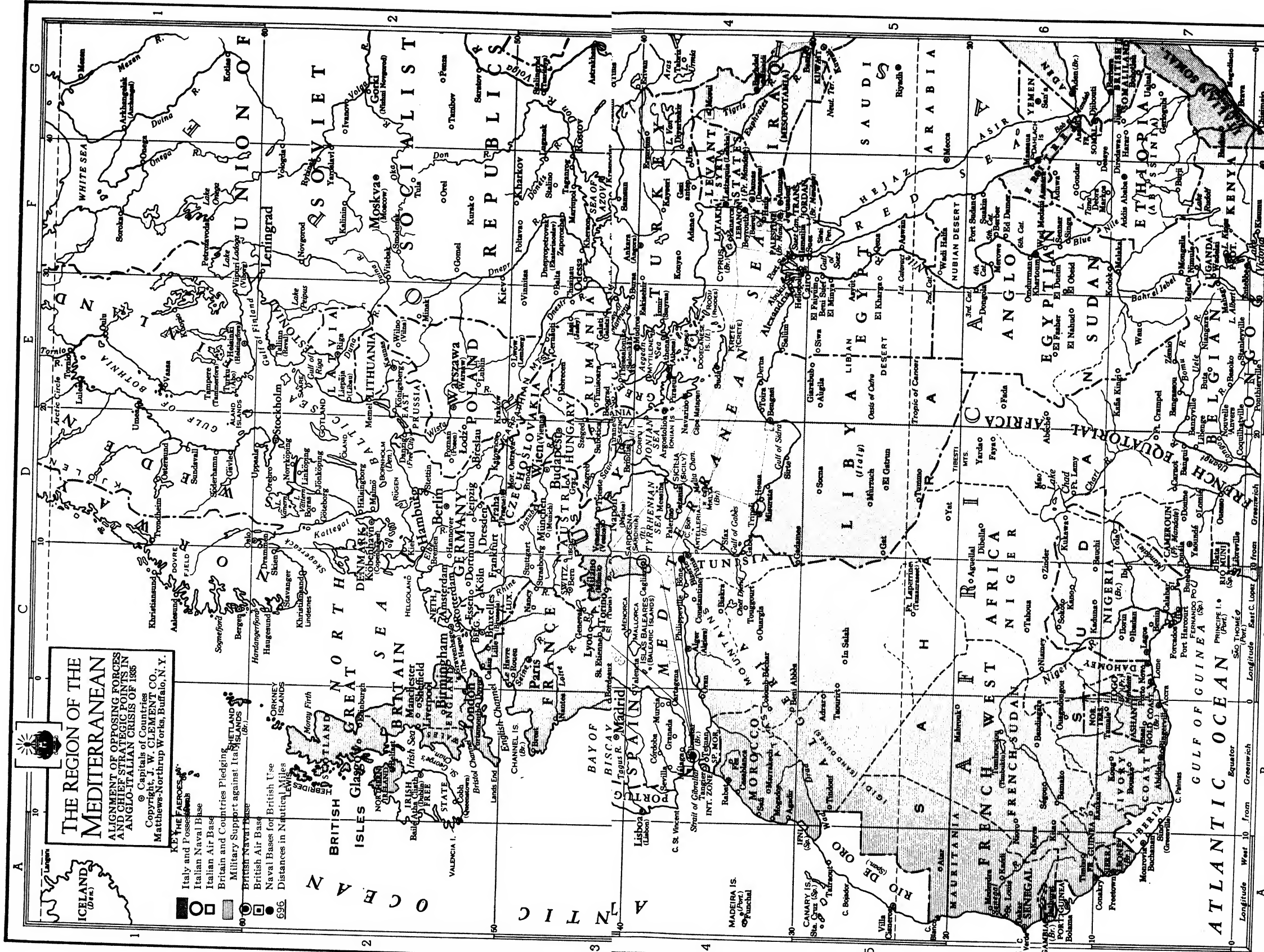
ALIGNMENT OF OPPOSING FORCES
AND CHIEF STRATEGIC POINTS IN
ANGLO-ITALIAN CRISIS OF 1935

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KEY THE FEATURES

- Italy and Possessions
- Italian Naval Base
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- Britain and Countries Pledging Military Support against Italy
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ATLANTIC OCEAN
GULF OF GUINEA
PRINCIPLE 1.0
SIO TIOUQUE
East C. Lopez
Longitude West 10 From Greenwich
Longitude East C. Lopez
Longitude

ful adjustment of the Austrian and other related questions. A conference in Rome to discuss the latter question was tentatively fixed for May 20, but subsequent developments forced the abandonment of these plans.

The Stresa powers further agreed, in collaboration with the Little Entente (q.v.), to consider the requests of Austria, Hungary, and Bulgaria for revision of the military clauses of the peace treaties. To forestall German military reoccupation of the demilitarized zone of the Rhineland, Britain and Italy reaffirmed their support of the Locarno treaty and announced their intention to fulfill their military obligations thereunder. Finally, the three powers declared that their aim was the collective maintenance of peace within the framework of the League, and that they would oppose "by all practicable means," any unilateral repudiation of treaties which might endanger the peace of Europe. Six months later Italy was to embark upon a war in defiance of the League's collective security system and in violation of the League Covenant, the Kellogg-Briand Pact, and the Italo-Ethiopian Arbitration Treaty of 1928.

In line with the policy agreed upon at Stresa, Britain, France, and Italy introduced a resolution in the League Council condemning German rearmament as a violation of the Versailles Treaty. This was unanimously adopted on April 16, with only Denmark abstaining. Hitler replied by denying the right of the League powers to set themselves up as judges concerning Germany's course.

These developments led to another threatening situation in Europe at a time when Italian troops were being sent to East Africa in growing numbers. To reassure both his own people and his Stresa allies that Italy would not be unduly weakened by his Ethiopian adventure, Mussolini issued a communiqué stating that the African force represented less than half of 1 per cent of the nation's total military reserves, which he placed at 7,938,000 men. During June and July the annual field manoeuvres were held in the region of the Brenner Pass leading to Austria, with 500,000 to 600,000 troops participating. Mussolini viewed this demonstration as a warning to the whole world that Italy, "despite the African situation, is present and powerful in Europe."

The Breach with Britain. Confident of his power, the Fascist leader carried forward vigorous preparations for the conquest of Ethiopia in the face of increasing opposition from Great Britain. He apparently had good grounds for believing during the first months of 1935 that the British would throw no obstacles in his way. But as the extent of his ambitions, comprising the whole of Ethiopia, became apparent, the menace to British imperial interests reinforced the strong pacifist and liberal sentiment in Britain and led the Conservative Government to warn Mussolini of its increasing concern. On June 23-24 Capt. Anthony Eden, British Lord Privy Seal, was sent to Rome to attempt to dissuade Mussolini. He offered the latter British help in securing minor territorial and economic concessions in Ethiopia, stating that Britain was ready to offer Ethiopia an outlet to the sea at Zeila in British Somaliland as an inducement for Ethiopian concessions to Italy. When Mussolini rejected the offer, Eden warned him that Britain "could not remain indifferent to events which might profoundly affect the League's future."

Thereafter the relations between Britain and Italy grew steadily more tense. While the British continued their efforts at conciliation they made

it plain that they would urge the imposition of League sanctions against Italy if these failed and prepared to back their stand with a naval demonstration in the Mediterranean. Mussolini maintained throughout a completely intransigent and defiant attitude towards Britain, meanwhile waving aside Italy's obligations and pledges under the League Covenant with unconcealed contempt. Britain and France, anxious both to save the League and to preserve the Stresa front against Germany, were obliged to offer Mussolini larger and larger territorial bribes, mainly at the expense of Ethiopia, in their efforts to prevent war in Ethiopia (see ETHIOPIA under *History*). Meanwhile the controlled Fascist press had unleashed a furious anti-British campaign, arousing the nation to resist British "dictation."

After Mussolini on August 18 had rejected another Franco-British proposal, the League Council convened September 4. Under Eden's leadership, the Council made a new effort at conciliation but at the same time prepared to apply the provisions of Article XV of the Covenant to the Ethiopian dispute, thus insuring eventual application of sanctions if Italy remained obdurate. In the Council as in the League Assembly, which convened a few days later, the British pressed for firm action. At the same time they began to strengthen their naval, military, and air forces throughout the Mediterranean. Sir Samuel Hoare's speech of September 11 before the Assembly demanding collective League action against Italy was followed by the secret movement of the powerful British home fleet to the Mediterranean. The fleet's arrival at Gibraltar September 17 was probably timed with the presentation of latest League conciliation formula to Italy and Ethiopia on September 18.

Mussolini was quite unmoved by this formidable pressure. He rejected the League peace formula on September 21 and took extensive measures to meet the threat of the British main fleet. Malta was rendered obsolete as a naval base by powerful Italian air and submarine concentrations at nearby points. Two full divisions of Italian troops were concentrated in Libya along the Egyptian border. The 200,000 troops in Eritrea menaced another flank of the Nile valley, where the British forces were greatly outnumbered. Italian bases in the Dodecanese were likewise strengthened and improved. Meanwhile the British had concentrated their naval forces at both ends of the Mediterranean and were feverishly rushing work on defenses and new bases in Egypt, Palestine, and Gibraltar. They were thus in a position to close both the Strait of Gibraltar and the Suez Canal and to cut off supplies and reinforcements from the Italian troops in East Africa.

Italy at War. In the face of these ominous preparations, Mussolini boldly staked Italy's future on the Ethiopian adventure. On October 2 he mobilized his people in public squares throughout Italy to hear a fighting radio address in which he declared that Italy, moved by "irresistible destiny," could have no more patience with Ethiopia. He expressed doubt that "the authentic French people" would join in sanctions against their ally of the World War or that the British people would "send Europe to its catastrophe" to defend a barbarous country. But should the League "dare" to apply sanctions, Italy was prepared for all eventualities. To economic sanctions it would respond "with our spirit of discipline, with our spirit of sacrifice, our obedience"; to military measures with military measures; and to acts of war with acts of war.

Il Duce's speech was the signal for the invasion of Ethiopia the following day. On October 4 Prime Minister Baldwin announced a great British rearmament plan. On October 6 President Roosevelt dealt Italian shipping a blow by warning Americans not to travel on belligerent ships. The following day the League Council declared Italy guilty of having attacked Ethiopia in violation of its obligations under the Covenant and this verdict was reaffirmed by the Assembly on October 10. Steps for the application of sanctions under Article XVI were immediately taken and they were placed in effect by all League States with the exception of Austria, Hungary, and Albania on November 18. See LEAGUE OF NATIONS.

The Anglo-Italian crisis reached its height during the week ended October 18. Peace between the two nations seemed at the mercy of an incident, with the certainty that if war occurred it would involve most of Europe and the Near East. Rival military and naval preparations were matched by the war of diplomacy and propaganda which raged at Geneva, Paris, and throughout the Mediterranean countries. The Italians incited the Egyptian nationalists against the British (see EGYPT under *History*), while the British began the intricate negotiations which before the end of the year brought them formal pledges of military aid from France, the Little Entente, and the Balkan Entente in case the British fleet was attacked as a result of the application of League measures.

A temporary lull in the Anglo-Italian crisis began on October 18 when the British Ambassador in Rome assured Mussolini that Britain would not take any action "beyond what might be agreed to or recommended by the League in conformity with the dispositions of the Covenant." Mussolini declared that his plans in Ethiopia and elsewhere did not threaten British interests. He also offered to withdraw his troops from the Egyptian border in Libya if Britain would withdraw its fleet from the Mediterranean. The British cabinet, however, declined to move the fleet while the Italian press continued its violently hostile attacks upon Britain. Moreover on October 21 the British announced a "neutrality" policy regarding the Italo-Ethiopian conflict which placed severe obstacles in the path of Italian shipping engaged in supplying the army in Eritrea and Italian Somaliland.

A week later the League Sanctions committee met and fixed November 18 for the application of comprehensive sanctions. This aroused Mussolini to a bitter speech at the University of Rome on October 31 in which he declared Italy would resist the sanctions "with indomitable will and supreme contempt." His speech incited mobs of students and others to riotous demonstrations against English hotels, shops, and other establishments in Rome. On November 11 a strong Italian note protesting against sanctions and threatening counter measures was sent to all members and non-members of the League. By the decree of November 12 the Fascist Government established a virtual foreign trade monopoly and prepared to divert foreign purchases from countries participating in sanctions.

Italy in the Grip of Sanctions. Despite these threats of reprisal, League sanctions against Italy went into effect November 18. It was the first time in the League's history that economic penalties had been enforced against an aggressor. Fifty States normally purchasing 60 per cent of Italy's exports barred all Italian exports except money, gold, silver, books, newspapers, maps, and music.

Fifty-two States placed an embargo on shipments to Italy of all raw materials needed for war except coal, oil, cotton, iron and steel, which were produced in large quantities by the United States and Germany—both non-League States.

This process of economic strangulation had already made itself felt in a general lowering of the standard of living before the end of 1935. Despite rigorous government restrictions, prices in Italy rose steadily, while the quantity and quality of goods declined. With export markets closed and raw materials unavailable, many factories shut down and unemployment increased. There was a scramble among other exporting nations to secure the trade which had been lost by Italy, the prospect being that even when sanctions were ended Italy would find it difficult to renew many of the severed economic ties which had been built up by generations of Italian traders. In November meat consumption was restricted to two days a week and the growing of all luxury crops was curtailed in favor of staples such as wheat, beans, and potatoes. Although many of the unemployed were enrolled in the armed forces—nearly 1,200,000 men were under arms at the end of the year—and many factories found employment in supplying the needs of the armies in Italy and Ethiopia, the grip of sanctions steadily restricted the economic life of the country. Vigorous efforts to render Italy more self-sufficient were only partly successful, in view of the poverty of natural resources.

A government order suspending publication of all Treasury, trade, public debt, and Bank of Italy statistics concealed the extent of the damage from general view. As early as July, 1935, the government's need for ready cash and foreign exchange led to the suspension of the 40 per cent minimum reserve requirements of gold and foreign exchange. In August the government had requisitioned all foreign securities and credits held by Italians in Italy and abroad. Later a big conversion loan involving additional cash payments by subscribers was made and finally in December the government was reduced to the necessity of collecting the wedding rings and other private gold supplies of private citizens. New loans and higher taxation were in prospect as the year closed. Nevertheless the bulk of the population seemed to stand solidly behind Mussolini and to be prepared for further sacrifices. Some foreign observers in Italy, however, reported signs of domestic discontent and of distrust of Mussolini's leadership. It was felt that a cleverer and perhaps less belligerent leader might have secured room for Italian expansion in Africa without arousing a veritable hornets' nest and exposing Italy to League sanctions. This feeling was particularly noticeable after Mussolini had failed to seize the favorable opening presented by the Hoare-Laval peace proposals in mid-December.

While the League Sanctions Committee had been studying the application to Italy of additional economic sanctions, including the delicate question of an embargo on oil, France and Britain had again attempted to negotiate a peace settlement. The formula submitted to Mussolini by Sir Samuel Hoare and Premier Laval went far beyond previous offers and practically gave Italy half of Ethiopia (see ETHIOPIA under *History*). Although the offer was much more liberal than could be justified on the basis of Italian military conquests in Ethiopia, Mussolini delayed his acceptance of it until publication of the Hoare-Laval formula caused it to be speedily repudiated at London and Geneva. The door to further diplomatic concessions was

suddenly slammed shut in Il Duce's face. The negotiations were taken out of the hands of Britain and France and entrusted to a League Committee of Thirteen, on which small States antagonistic to the idea of buying off the aggressor were heavily represented. Worse than this, Sir Samuel Hoare was sacrificed in Britain for his part in the affair, and Anthony Eden—regarded as a champion of the League and as an enemy of Mussolini—was appointed to the key post of British Foreign Secretary. In Italy it was realized that no solution of the Ethiopian situation satisfactory to Mussolini could now be achieved except by force of arms and the Italian armies were retreating rather than advancing in Ethiopia (q.v.). On December 30 Mussolini was obliged to admit that the war in Ethiopia could not soon be brought to a successful issue, inasmuch as the Ethiopians evaded a decisive battle, and that the war would extend into another year.

Moreover Italy's allies in Central Europe—Austria and Hungary—showed a distinct cooling of affection for her now that her future seemed so dark. Hungary began to make new advances to Germany, while Austria appeared to be turning towards the Little Entente as her main support against absorption by Germany. The return of George II to the Greek throne on November 25 with a treaty of alliance with Britain in his pocket had upset Mussolini's plan to control Greece through Marshal Kondylis. Turkey, openly hostile, had mobilized additional troops opposite the Italian bases at Rhodes and the other Dodecanese Islands. Italian prestige, long so dominant among Near Eastern peoples accustomed to admire strong and colorful leaders, was rapidly on the wane as a result of the diplomatic and military morass into which a headstrong dictator had led his people. There was thus substantial basis for the gloom which pervaded Italy at the close of 1935—a gloom in marked contrast to the almost hysterical enthusiasm with which the capture of Adowa was hailed on October 6.

Other Events. By a cabinet reorganization announced Jan. 16, 1935, Premier Mussolini took over the Colonies portfolio, thus releasing Gen. Emilio de Bono for service in East Africa. Il Duce now held 7 out of the 13 cabinet posts. New appointees to the other 6 posts were named on January 24, as follows: Press and Propaganda, Count Galeazzo Ciano di Cortellazzo, Mussolini's son-in-law; Justice, Arrigo Solmi; Finance, Count Paolo Thaon de Revel; Public Education, Count Cesare Maria de Vecchi di Val Cismon; Public Works, Luigi Razza; Agriculture and Forestry, Edmondo Rossoni; Communications, Stefano Benni. Signor Razza (q.v.), together with the noted African explorer, Raimondo Franchetti, and five others, was killed in the crash near Cairo, Egypt, on August 7 of an aeroplane in which he was flying to Eritrea.

The bursting of a dam near Ovada, in Piedmont, on August 13, caused a loss of life estimated at between 115 and 120. Hundreds of houses were swept away and several entire villages were destroyed as the flood swept down the valley of the River Orba.

For the attitude of the various powers towards Italy in connection with the Ethiopian war, see ARABIA, ARGENTINA, AUSTRIA, BRAZIL, BULGARIA, CZECHOSLOVAKIA, EGYPT, ETHIOPIA, FRANCE, GERMANY, GREAT BRITAIN, GREECE, HUNGARY, MALTA, PALESTINE, RUMANIA, SWEDEN, TURKEY, UNITED STATES, YUGOSLAVIA, ETC., under *History*; also LEAGUE OF NATIONS.

IVORY COAST. See FRENCH WEST AFRICA.

JAMAICA, *ja-mā'ka*. A British West Indian colony. Area, 4450 sq. miles; population (Dec. 31, 1934, estimate), 1,104,775 compared with 858,118 (1921 census). The Cayman Islands (see below), Turks and Caicos Islands (see below), Morant Cays, and Pedro Cays are dependencies of Jamaica. During 1934 there were 34,247 births, 4294 marriages, and 18,731 deaths. Kingston, the capital (with Port Royal), had 63,711 inhabitants in 1921; Spanish Town, 8694; Port Antonio, 6272; Montego Bay, 6580; Savanna-la-Mar, 3442; Port Maria, 2481. The total enrollment in elementary schools for 1933-34 was 142,141.

Production and Trade. The main products are listed below under exports. During 1934, imports (c.i.f.) totaled £4,777,069 and consisted of food-stuffs, manufactured goods, coal, and lumber; exports (f.o.b.), £3,219,072 of which bananas (15,974,906 stems) represented £1,665,082; sugar (54,227 long tons), £448,160; coffee (3184 long tons); rum (459,798 gal.), £135,803; coconuts, £96,746; pimento, £96,348; grapefruit, £78,370; logwood extracts, £78,256; ginger (2,394,669 lb.), £64,579; cocoa (4,439,480 lb.), £42,708; oranges, £32,572; logwood, £32,137. In 1934, 1326 vessels aggregating 3,844,127 net tons entered the ports and 1291 vessels aggregating 3,812,128 net tons cleared. During 1934, 39,262 tourists visited Jamaica.

Government. For the fiscal year ended Mar. 31, 1935, revenue totaled £2,260,352; expenditure, £2,255,502; public debt, £3,835,637. Government was vested in a governor aided by a privy council of 8 members, and a legislative council of 30 members (the governor, 5 ex-officio, 10 nominated, and 14 elected members). Captain-General and Governor-in-Chief in 1935, Sir Edward Denham.

Cayman Islands. A dependency of Jamaica, comprising Grand Cayman, Little Cayman, and Cayman Brac. Area, 104 sq. miles; population (1934), 6009. Georgetown, the capital, had 1321 inhabitants in 1934. Coconuts, green turtle, thatch rope, hides, and turtle shell were the main products. In 1934, imports were valued at £23,145; exports, £13,315; revenue, £5695; expenditure, £6995. Budget estimates (1935): revenue, £7250; expenditure, £7880. A meteorological and wireless station was under construction on Grand Cayman during December, 1935. The dependency was administered by a commissioner under the direction of the Governor-in-Chief of Jamaica.

Turks and Caicos Islands. A dependency of Jamaica. Area, 166 sq. miles; population (1932), 5300. Salt, conchs, turtle shell, sisal, were the main products. In 1934, imports were valued at £21,114; exports, £12,973 (salt, 522,568 bushels); revenue, £7024; expenditure, £8959. Government was administered by a commissioner (with headquarters at Grand Turk) assisted by a legislative board, under the Governor-in-Chief of Jamaica.

History. On Sept. 27, 1935, a tropical hurricane, which reached a velocity of 120 miles an hour, swept across Jamaica and uprooted about 2,000,000 banana trees. A second storm struck the eastern part of Jamaica on October 21, two persons were drowned, communications were disrupted, nearly all standing fruit-bearing banana trees were blown down, and younger banana trees were damaged.

JAPAN. A Far Eastern empire, comprising (1) Japan proper, or the four main islands of Honshu, Kyushu, Shikoku, and Hokkaido, with some 600 smaller islands; (2) Formosa (Taiwan); (3) Korea (Chosen); and (4) Karafuto (southern Sakhalin). In addition Japan controlled the leased

territory of Kwantung and the South Manchuria Railway zone in Manchuria and mandated territories (Marianne, Caroline, and Marshall Islands) in the North Pacific. During 1931-33 it established a protectorate over Manchuria and Jehol in North China, the new State being designated Manchoukuo. Capital of Japan, Tokyo; Emperor in 1935, Hirohito, who ascended the throne Dec. 25, 1926. See separate articles on FORMOSA, KOREA, KARAFUTO, JAPANESE PACIFIC ISLANDS, KWANTUNG, and MANCHOUKUO.

Area and Population. The area and population of the empire in 1930 (census figures) and at the end of 1933 (estimates) are shown in the accompanying table.

JAPANESE EMPIRE: AREA AND POPULATION

Island	Area, sq. miles	Population, 1930 census	Population, 1933 estimates
Japan proper	147,593	64,450,005	69,881,759
Korea	85,288	21,058,305	20,791,321
Formosa	13,889	4,592,537	5,060,507
Karafuto	13,934	295,196	300,298
Japanese Empire .	260,614	90,396,043	96,033,885
Kwantung *	1,438	1,328,011	1,408,755
Mandated Pacific Is.	830	69,626	80,884

* Including South Manchuria Railway Zone.

The population of Japan proper on Jan. 1, 1935, was 70,782,384, of which 35,721,303 were males and 35,061,864 were females. The increase of population during 1934 was 900,625, compared to 1,016,054 in 1933. The movement of population for Japan proper in 1933 was: Births, 2,121,253; deaths, 1,193,987; marriages, 486,058; divorces, 49,282. There were 749,158 Japanese subjects residing abroad in 1933 and 29,642 foreigners residing in Japan. In proportion to the extent of arable land, Japan is the world's most densely populated country, with some 70,000,000 living in an area the size of California. Populations of the chief cities as estimated in 1934 were: Tokyo, 5,662,900; Osaka, 2,722,700; Kyoto, 1,107,700; Nagoya, 1,017,700; Kobe, 853,800; Yokohama, 703,900. There were in Japan proper 34 cities of more than 100,000.

Education. Elementary education is compulsory and less than 1 per cent of the adult population is illiterate. In 1931-32 there were 1622 kindergarten schools, with 126,564 pupils; 25,665 primary schools, with 10,381,290 pupils; 15,083 preparatory technical schools, with 1,271,971 pupils; 558 boys' middle schools, with 356,478 pupils; 980 girls' high schools, with 362,265 pupils; and various other special institutions. The six imperial universities had 20,196 students and 40 other institutions of university grade had 69,985 students.

Production. Manufacturing accounts for about 32.7 per cent of the national income, commerce for 25.4 per cent, and agriculture for about 17.7 per cent. Agriculture, however, supports nearly half the population of Japan proper, although only 14,775,000 acres, or 15 per cent of the total area, is suitable for cultivation. Rice is the main crop and chief article of diet. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in 1000 bu.): Rice, 265,377 (362,677); wheat, 48,379 (41,020); oats, 12,986 (10,437); barley, 66,327 (62,786). Silk cocoon production in 1934 was 326,743,000 kilograms, valued at 203,849,000 yen, while the output of raw silk was about 98,475,000 lb. Japan normally supplies about three-fourths of the world supply of silk, and about 95 per cent of its output is sold to the United States. Fish ranks second to rice as a staple article of diet. In 1933 the fish catch totaled about 4,100,000 metric tons, valued at 260,000,-

000 yen. The livestock census of 1932 showed 1,541,086 horses, 1,529,309 oxen, 228,998 goats, and 926,010 swine. The 1935 rice crop was 287,000,000 bu.

Deficient in minerals, except for coal and copper, Japan is obliged to import most of her requirements from abroad. Mineral production in 1934 was: Coal, 33,062,000 metric tons; copper, 149,450,000 lb.; petroleum, 1,458,300 bbl.; gold, 15,072 kilograms; silver, 215,300 kilograms. The value of industrial production in 1933 was 7,829,319,152 yen, or 31 per cent higher than in 1932. There were 81,949 industrial establishments in 1933, with 1,901,328 operatives. Of the total 1933 value of production, textiles accounted for 37 per cent; chemicals, 15.6; food and drink, 12.9; machinery and apparatus, 11.3; metals, 11.2. The 1934 output of pig iron was 2,401,700 metric tons; steel, 3,811,200 metric tons; electric power, 18,160,000,000 kwh. (in 1933); rayon, 150,000,000 lb.

Foreign Trade. Imports into Japan proper in 1934 were valued at 2,282,531,000 yen (1,917,219,000 yen in 1933) and exports at 2,171,925,000 yen (1,861,045,000 yen in 1933). The 1934 trade balance was unfavorable by 142,000,000 yen (86,000,000 yen in 1933) and in addition invisible trade suffered an adverse balance of about 7,600,000 yen, due to military and other expenditures in Manchuria and the repatriation of Japanese bonds held abroad. The merchandise imports and exports in 1934 increased 19 and 17 per cent, respectively, over 1933. The distribution of the 1933 and 1934 trade by principal foreign countries is shown in the accompanying table.

JAPAN PROPER: DISTRIBUTION OF TRADE [Thousands of yen]

Country of origin or destination	1933		1934	
	Imports	Exports	Imports	Exports
United States	620,779	492,237	769,359	398,928
British India	204,737	205,154	289,671	238,220
Kwantung and Manchuria	168,058	303,139	191,431	403,019
China and Hong Kong	115,444	131,672	121,043	150,559
Netherlands India	55,709	157,487	63,464	158,450
Australia	211,391	65,380	214,295	79,885
Great Britain	82,558	87,849	70,036	109,269
Germany	95,797	12,411	109,583	19,677

The value of the principal 1934 imports was (in millions of yen): Raw cotton, 731.4; foodstuffs, 197.3; iron and iron products, 191; raw wool, 186.5; drugs and chemicals, 144.3; machinery, 143.6; oils and fats, 136.6. The chief exports items (in millions of yen) were: Cotton textiles, 541.8; raw silk, 286.8; silk textiles, 226; food products, 172.7; metals and manufactures, 158.4; clothing, etc., 154.3; machinery, 125.

Japan's 1935 imports totaled 2,472,000,000 yen; exports, 2,499,000,000 yen. United States statistics for 1935 showed imports from Japan of \$152,886,270 (\$119,251,106 in 1934) and exports to Japan of \$203,260,465 (\$210,480,173 in 1934).

Finance. For the fiscal year ended Mar. 31, 1935, total governmental revenues were 2,247,000,000 yen, including proceeds of bond issues amounting to 742,000,000 yen. Expenditures totaled 2,163,000,000 yen. In the previous year receipts were 2,331,700,000 yen (loans, 783,000,000) and expenditures 2,254,600,000 yen. Excluding loan receipts, the deficit was about 658,000,000 yen in 1934-35 and 801,000,000 in 1933-34. The national debt on June 30, 1935, stood at 9,103,900,000 yen (domestic, 7,701,000,000; foreign, 1,402,900,000), compared with a total of 9,090,400,000 yen on Mar. 31, 1934. The yen (par value, \$0.8440) exchanged at an average of \$0.2554 in 1933 and \$0.2972 in 1934.

The budget estimates for 1935-36 balanced at

2,215,413,809 yen, including extraordinary receipts and expenditures of 879,825,965 and 905,111,281 yen, respectively.

Communications. Railways open to traffic in 1933 had a total of 13,931 miles of line (state lines, 9485 miles). In the fiscal year 1932-33 all lines carried 1,208,817,830 passengers and 83,945,270 metric tons of freight. Operating revenues of the state lines in 1934-35 were 495,500,000 yen (425,954,073 yen in 1933-34). Highways extended 591,228 miles in 1932. In 1932-33 commercial airplanes made 51,984 flights and covered a distance of 2,807,113 kilometers. On June 30, 1935, the tonnage of the Japanese merchant marine was 4,085,700. The net tonnage of vessels entering the ports in the overseas trade with cargo and in ballast in 1934 was 63,374,000; tonnage cleared, 63,230,000.

Government. Executive power is vested in the emperor, who acts with the advice and aid of a ministry appointed by and responsible to him, but every law requires the approval of the Imperial Diet of two chambers. The Upper Chamber (House of Peers) of 403 members includes 184 life members chosen on the basis of rank, wealth, and other qualifications; the other Peers are elected for seven years by special groups. The House of Representatives consists of 466 members elected for four years. There is a Privy Council, consulted by the Emperor on important national problems. The national cabinet appointed July 8, 1934, included members of the Seiyukai and Minseito parties, the military, and non-party groups. Premier in 1935, Adm. Keisuke Okada. Other leading cabinet members were: Foreign Affairs, Koki Hirota; Home Affairs, Fumio Goto; Finance, Korekiyo Takahashi; War, Gen. Senjuro Hayashi, Marine, Adm. Mineo Osumi.

HISTORY

Expansion on the Mainland. Taking advantage of the growing European crisis, which rendered the Western powers impotent in the Far East, Japan during 1935 extended her sphere of control into Mongolia and China proper. The programme of expansion on the Asiatic mainland, inaugurated with the annexation of Korea in 1910 and resumed with the conquest of Manchuria and Jehol in 1931-33, was thus carried a long step forward. As in Manchuria, the Japanese avoided outright annexation, exercising their newly won political and military control through a puppet native government—the Hopei-Chahar Political Council. Nevertheless they effectively erased the influence of the Nanking Government in Mongolia and North China and secured for Japan a position of great economic, political, and military significance.

Japanese control of North China and Inner Mongolia placed the Soviet republic of Outer Mongolia between the pincers formed by Manchoukuo and Inner Mongolia and offered Japan a new base for an attack upon Soviet Siberia in the event of war with the Soviet Union. Moreover Japan's new position in Peiping, the Manchu capital of China, established a centre of gravity in China proper, greatly facilitating the expansion of Japanese influence southward into the rich provinces of Central China. No sooner was Japanese political and military control established in Hopei and Chahar than steps were taken to corner the North Chinese market for Japanese manufactures. A wholesale reduction of taxes was announced, and government-supported Japanese companies were formed for the exploitation of North Chinese markets and resources. It appeared certain that

cheap Japanese manufactures, and the short haul from Japan, coupled with governmental discrimination against foreign concerns, would give Japan complete economic control of North China. Another important result of Japan's expansion was that it promised to check the spread of communism in China and established a barrier to Communist penetration into Manchoukuo, Korea, and Japan itself.

While advancing in North China and Mongolia, Japan continued the wholesale political and economic reorganization of Manchoukuo needed to convert that rich region into a more profitable field for economic exploitation. The transference of Soviet interests in the Chinese Eastern Railway to Manchoukuo by an agreement signed Mar. 23, 1935, in Tokyo gave Japan undisputed control in Manchuria. Despite official British and American protests, the government oil sales monopoly in Manchoukuo was put into effect, forcing British and American oil companies to withdraw from that territory. On June 17 both the British Foreign Secretary and the American State Department reiterated their charge that the monopoly violated the Nine-Power Treaty and other agreements guaranteeing the "open door" in China.

Gradual abandonment of the pretense that the government of Manchoukuo represented the spontaneous will of its 30,000,000 subjects was seen in the resignation of Prime Minister Cheng Hsiao-hsu, a highly respected Chinese who had lent prestige to the Manchoukuoan régime. He was succeeded on May 22 by Chang Ching-hui, described as one of the least-respected henchmen of Chang Tso-lin, the former war-lord of Manchuria. In order "to insure the free operation of Japanese policy," the Tokyo Cabinet on August 9 approved a plan for relinquishment of all extraterritorial rights in Manchoukuo by the end of 1937, foreign as well as Japanese.

Friction with the Powers. The Japanese advances on the mainland naturally evoked repeated protests from the Western powers, whose commercial and financial interests in China proper were menaced. The expansion of Japanese control into North China directly threatened the great British investments and commercial interests in North China and the Yangtze valley. In September Sir Frederick Leith-Ross, British treasury adviser, arrived in China and apparently played an influential rôle in China's departure from the silver standard on November 3, a move which constituted a direct check to Japanese economic domination of China (see CHINA under History). On November 25 the Japanese Foreign Office spokesman sharply warned Sir Frederick not to interfere with the Japanese-inspired "autonomy movement" in North China. News that Japanese troops had occupied stations along the North China Railway, which was partly built with British capital, was followed on November 28 by an immediate British protest and an inquiry at Tokyo as to Japan's real intentions in China.

The United States Government on December 5 likewise rejected Japan's claim to hegemony in China. Reiterating that the United States had not abandoned its treaty rights and its economic interests in China, Secretary of State Hull declared "an effort is being made—and is being resisted—to bring about a substantial change in the political status and conditions of several of China's northern provinces." These protests by Britain and America were recognized as mere legal moves to keep the record straight and pave the way for a

reassertion of treaty rights under more favorable conditions. As was expected, Japan ignored the protests and neither Britain nor the United States were prepared to back their protests by armed force. It was realized in Japan, however, that there must eventually be a show down with Britain, the United States, or both combined, if the Japanese expansion continued to endanger Anglo-American interests in China. It was with the aim of maintaining Japanese predominance in the Far East against this threat that the Japanese delegation to the London Naval Conference, opening in December, 1935, demanded absolute naval parity with the two great naval powers. See *GREAT BRITAIN under History*; *NAVAL PROGRESS*.

The Japanese advance in Inner Mongolia and the sporadic frontier clashes between Japanese-Manchoukuoan and Outer Mongolian troops aroused a more determined and effective reaction from the Soviet Union. Although the sale of the Chinese Eastern Railway had removed an important source of Soviet-Japanese tension, relations between the two powers remained highly strained throughout the year. The Soviet Government rushed work on its strategic railways and defensive works in the Far East and evidenced its determination to fight Japan rather than permit her to absorb Outer Mongolia. See *CHINA, MONGOLIA, and UNION OF SOVIET SOCIALIST REPUBLICS under History*.

Another source of friction with the powers, and particularly with the United States, was the reported fortification of the former German Pacific islands obtained by Japan under a mandate of the League of Nations. Although Japan's withdrawal from the League, effective in March, 1935, left the status of these islands in doubt, the Japanese representative before the League Mandates Commission insisted on October 28 that Japan's withdrawal from the League in no way affected her rights in the islands. The strategic value of the islands in case of a naval war with the United States was stressed by Japanese naval authorities during the year, but reports of their fortification were officially denied. It was admitted, however, that large sums were being spent in improving the harbors, establishing air fields, etc., and that efforts of foreign visitors to determine the nature of these works were frustrated by the Japanese authorities.

Japan's Trade Drive. The phenomenal expansion of Japanese foreign trade, continuing during 1935, increased the outcry against Japanese competition which had been raised in Britain and other industrial countries in 1933-34. The British erected new tariff barriers against cheap Japanese goods in Egypt and other parts of the empire. Canada and Japan engaged in a severe trade war over the question of alleged tariff discriminations, which was not ended until the advent of the new Liberal Government in Canada (q.v.). Japanese trade and goodwill missions were active in Australia, Latin America, and practically all parts of the world.

American manufacturers during 1935 joined in the agitation against the flood of cheap Japanese goods, and with some effect. A ruling of the United States District Court at Los Angeles on May 4 barred Japanese electric light bulbs from the United States on the ground of infringement of American patents. After representations by the United States Government, Japan early in October agreed to limit her exports of cotton piece goods to the Philippines to 45,000,000 square meters

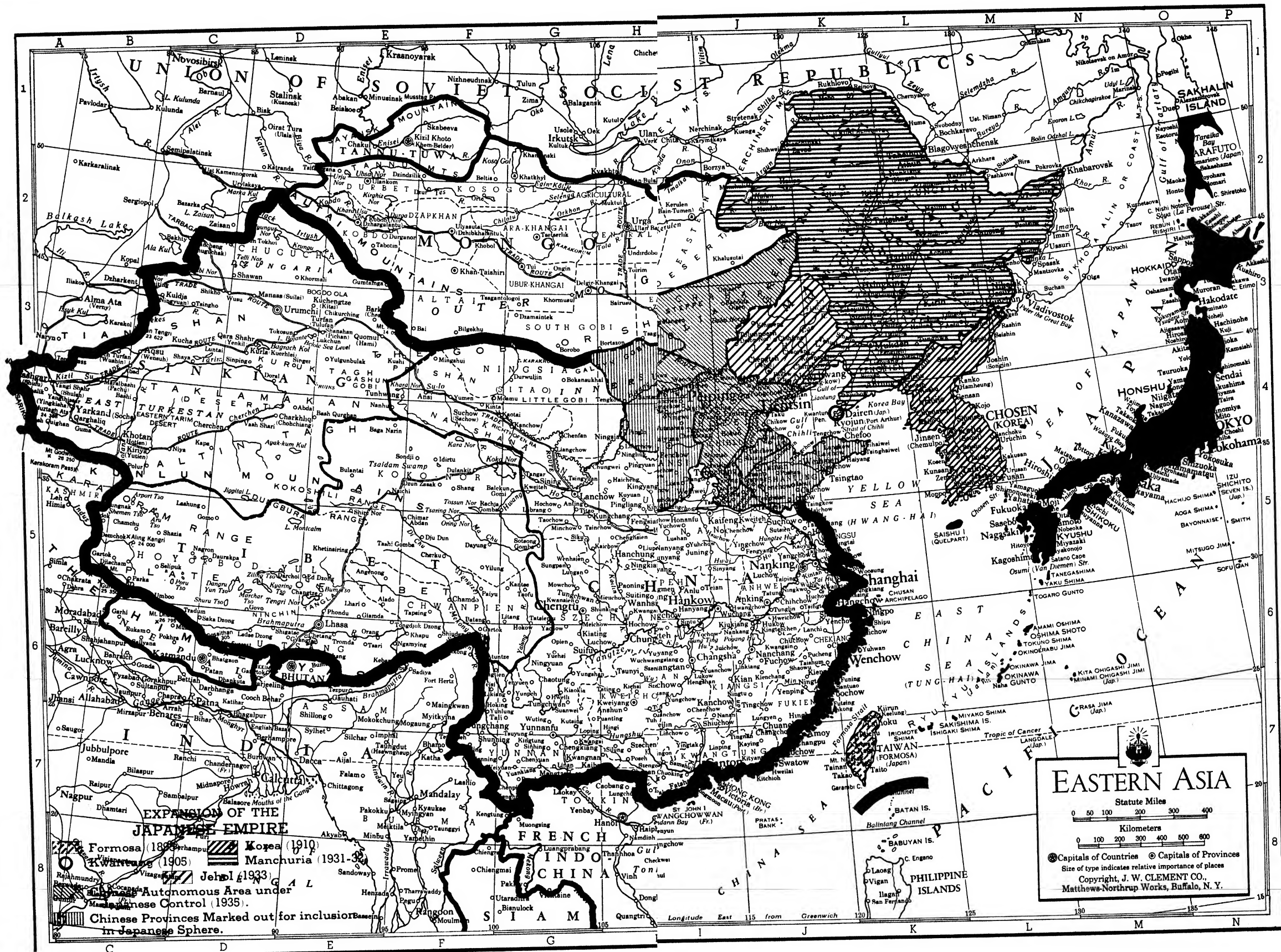
annually, provided the Philippine tariff on piece goods was not raised. On December 23, the American State Department announced another agreement under which Japan promised to restrict to "moderate levels" her exports of cotton textiles to the United States. The Japanese hoped, by not pushing their competition to the extreme, to check the movement for higher tariffs against Japanese goods entering the United States. At the same time Japanese officials were making strenuous efforts to free their textile industry of dependence upon American cotton by encouraging the growing of cotton in South China, Brazil, and other territories. See *NETHERLAND INDIA under History*.

Internal Affairs. It became increasingly obvious during 1935 that the struggle behind the scenes between the liberal and reactionary forces in Japan was approaching a climax. Since the military advocates of expansion by the sword took the bit in their teeth in 1931 and launched the attack upon Manchuria in defiance of the civil government, the moderate statesmen of Japan had been gradually reasserting their authority over the extreme militarists. With the support of Prince Saionji, the last of the Elder Statesmen, and indirectly of the Emperor, the moderate party succeeded in seating the liberal Viscount Saito as Premier in 1932 and in naming Admiral Okada, a person of similar moderate views, to succeed Saito when the latter's cabinet fell in 1934.

In the Saito Cabinet the extremist General Araki, Minister of War, generally had his way. He was spokesman of the military party that carried through the rape of Manchuria and Jehol, withdrawal from the League, the denunciation of the Washington and London naval treaties, and the Japanese penetration of 1935 into North China and Mongolia. While the moderates were not opposed to Japan's military expansion, they feared that the reckless rate at which the extremists were proceeding jeopardized the gains already made and placed an undue strain upon Japan's economic and financial structure. They also wished to proceed without unduly provoking the stronger Western powers. The extremists, on the other hand, were determined to proceed immediately with the establishment of complete control over China and to launch an attack upon the Soviet Union before the Russians completed their new bases for heavy industry in central and eastern Siberia.

The extremist programme called for an expansion of military and naval armaments at a rate which the capitalist system in Japan was patently unable to sustain. Accordingly they favored the establishment of "a new economic system which can provide the expenditures necessary for defense without threatening the national life." A series of pamphlets issued in 1934 and 1935 by the publicity bureau of the army bluntly stated that the extreme militarists aimed at a Fascist economic and political system. The series of assassinations of moderate and liberal cabinet officers and financiers by military and naval extremists during 1932-35 indicated the grave nature of the struggle.

Despite all efforts of the army extremists the inner group of Imperial advisers continued to be dominated by the moderates. Both the Saito and Okada Cabinets, however, not only included influential spokesmen for the extremists but were pressed in the direction of extremist policies by the fact that the Seiyukai party, holding a majority in the lower house of the Diet, had strong nationalist and Fascist leanings. The replacement



of General Araki by General Hayashi as Minister of War in January, 1934, gave the moderates another key post in the cabinet. But Hayashi's attempts to curb the extremist army officers were in large part foiled by the opposition of General Mazaki, Director General of Military Education. In July, 1935, the War Minister ordered wholesale changes in army personnel at the annual August promotion period in order to give moderate officers the key posts. Dismissing Mazaki, who refused to approve these changes, General Hayashi transferred many extremist officers to unimportant posts and elevated the moderates.

The bitterness aroused by these events were reflected in the assassination on August 12 of Lieut.-General Nagata, administrative director of personnel changes, by an extremist lieutenant-colonel who had been ordered to Formosa. This was the first instance of a political murder in which both assassin and victim were army officers in active service, and consequently aroused grave apprehension in official circles. A series of army conferences were held, at which abstention from politics was urged upon all officers, and on September 4 General Hayashi resigned to placate the extremists. General Kawashima succeeded him. Meanwhile the extremists had won another victory by the appointment of Yosuke Matsuoka as president of the South Manchuria Railway. Leader of a Fascist anti-party movement, he was also an advocate of active expansion on the mainland and of a strung policy against the Soviet Union.

The moderate-extremist struggle continued unabated, however. In China the extremist clique of the army and the Japanese Foreign Office were frequently found working at cross purposes, the one striving to gain by force what the other sought by diplomacy and peaceful negotiation. The appointment of Viscount Saito as Keeper of the Privy Seal on December 27 represented a severe setback for the extremists inasmuch as the holder of this office wields strong influence over the Emperor. The Japanese press and the Opposition Minseito party likewise showed more open resistance to extremist ideas. The issue of fascism versus Japan's modified form of representative government was thus bound to come before the voters when the quadrennial elections to the Diet were held early in 1936.

The deep ramifications of this issue was indicated by the purging of Japanese universities of liberal professors and books which challenged the extremist doctrine of a totalitarian state. A statement by Dr. Tatsukichi Minobe, eminent Japanese authority on constitutional law, that the Emperor was "the highest organ of the State" aroused such a furor that he was forced to resign from the House of Peers. The extremists declared this statement an insult to the Emperor, inasmuch as it implied that sovereignty rested with the people.

See AUSTRALIA, CANADA, CHINA, GREAT BRITAIN, MONGOLIA, PHILIPPINES, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

JAPANESE PACIFIC ISLANDS. By the treaty of Versailles Japan was given the mandatory right over the former German South Sea Islands north of the equator. They include (1) **MARIANA** (or **LADRON**) group of 14 islands, the main ones being Saipan, Tinian, Rota; (2) **CAROLINE** group of 549 islands, the main being Yap, Palau, Angaur, Spring, Summer, Wednesday, Ponape, Kusaie; (3) **MARSHALL** group of 60 islands, the most important being Jaluit. Total area, 960 sq. miles; to-

tal population (Sept. 1, 1934), 85,605 compared with 69,626 (1930 census).

Production. Sugar, tapioca, bananas, coffee, yams, taro, copra, alcohol, and phosphate were the main products. In 1933, imports were valued at ¥8,989,740; exports, ¥18,739,675. The exports of refined phosphate during 1933-34 totaled 66,442 tons valued at ¥1,308,840 (yen averaged \$0.2972 for 1934, and \$0.1907 for 1933).

Government. Budget estimates were balanced at ¥5,635,675 for 1934-35, and at ¥5,977,696 for 1935-36. A governor, with headquarters at Koror in the Caroline group, administered the islands under the Japanese Minister of Overseas Affairs. Governor, Kisao Hayashi. See JAPAN under *HISTORY*. Nanyo is the Japanese name of the islands.

JAVA. See NETHERLAND INDIA.

JELlicOE, jĕl'ī-kō, JOHN RUSHWORTH JELlicOE, 1st EARL. A British naval officer, died in London, Nov. 20, 1935. Born in Southampton, Dec. 5, 1859, he was educated at Rottingdean and in 1872 entered the British Navy. Commissioned as a sub-lieutenant in 1880, two years later he saw service in the Egyptian War, and received the Khedive's bronze star. In 1883 he studied gunnery at the Royal Naval College, becoming an expert in this branch of the service, and from 1886 to 1888 he saw service as a gunnery lieutenant on the *Monarch*. In the latter year he was returned to shore duty and served on the staff of the gunnery school until 1890. On June 22, 1893, he commanded the *Victoria*, which was sunk during manœuvres off Tripoli, Syria, narrowly escaping death by drowning. Shortly after he was appointed to the *Ramillies*, and later did shore duty again. Appointed captain in 1897, the following year he was sent to China as commander of the *Centurion*, and during the attempted relief of the Peking Legations, commanded a Naval Brigade and served as chief of staff to Vice Admiral Sir E. Seymour. He was severely wounded during the operations, and in 1900 was made a Commander of the Bath.

In 1901 he was again returned to shore duty and served as naval assistant to the Controller of the Navy, but within two years was made commander of the cruiser *Drake*. From 1905 to 1907 he was Director of Naval Ordnance, and while holding that office furthered the advance of long range firing, and assisted in the development of naval gunnery on lines which more closely approximated to real war conditions. The year 1907-08 found him as a Rear Admiral of the Atlantic Fleet, commanding the *Albemarle*. At the end of the year he was appointed a Lord Commissioner of the Admiralty and Controller of the Navy. He held this post until 1910 when he was made acting Vice Admiral in command of the Atlantic Fleet, and the year after, Commander of the 2d Division of the Home Fleet. While serving in this capacity he carried on gunnery experiments which resulted in the adoption of a new system of ordnance operation—a milestone in the history of the navy.

Jellicoe was appointed Second Sea Lord of the Admiralty in 1912 and two years later second in command to succeed Admiral Sir George Callaghan, Commander of the Grand Fleet. He was given the acting rank of Admiral, which was confirmed in 1915. He held this post until 1916, when he was transferred to the Admiralty as First Sea Lord for the purpose of coping with the German submarine menace.

As Commander of the British Grand Fleet, Admiral Jellicoe conducted the Battle of Jutland, which took place on May 31, 1916, in the North

Sea—the only time during the War that the British Grand Fleet and the German High Seas Fleet met. Much adverse criticism was directed at Jellicoe's failure to follow up the advantages gained during the battle and sink the German fleet, but his belief, concurred in by high naval authorities, that to follow in the path of an enemy's battle fleet, which could advantageously use mines and torpedoes, was foolhardy and the unfortunate events of the night, whereby he was at times unfamiliar with the enemy's position, led him to pursue a course that enabled the German fleet to make its way homeward. Inasmuch as the German High Fleet, though not destroyed, was effectively silenced for the remainder of the War, the policy of Jellicoe has been held justified.

In 1917 he was appointed Chief of Naval Staff and two years later Admiral of the Fleet, during which time he visited the Dominions and advised the colonial authorities on naval matters. In 1920 he was appointed Governor-General and Commander-in-Chief of the Dominion of New Zealand, and at the end of his term in 1924 was placed on the retired list. Always a big navy man, he attended the naval parley at Geneva in 1927 and fought the terms of the limitations of arms treaty.

He was created Viscount Jellicoe of Scapa (1918) and, in 1919, received the thanks of Parliament and a grant of £50,000. In 1925 he received the additional title of Viscount Brocas of Southampton, and was created an Earl for his services in New Zealand. Many honors were conferred upon him, including Knight Commander of the Royal Victorian Order (1907), Knight Grand Cross of the Bath (1915), Knight Grand Cross of the Royal Victorian Order (1916), Order of Merit (1916). He succeeded Earl Haig as head of the British Legion in 1928.

Lord Jellicoe inspired loyalty in his subordinates and was a man of singleness of purpose and great personal courage, albeit cautious in his conduct of naval warfare. He published *The Grand Fleet, 1914-16: Its Creation, Development, and Work* (1919), a defense of his conduct of the Battle of Jutland; *The Crisis of the Naval War* (1920); *The Submarine Peril; the Admiralty Policy in 1917* (1934).

JEWISH AUTONOMOUS TERRITORY. See BIRO-BIDJAN.

JEWS. The Crisis in World Jewry. The position of the Jews in the western world showed no improvement during 1935 and in some respects became markedly worse, especially in the area of most intense persecution, Germany. This raises the question of the meaning of the contemporary crisis in Jewish affairs, a matter which has engaged the thought of some of the finest Jewish minds. An excellent statement of the matter in economic terms which not only takes into account the general economic condition of western capitalism but also the economic relations within the Jewish community, was made by Mr. Jakob Lestshinsky in the *Jewish Frontier* for October, 1935.

After calling attention to the fact that "there is a crisis in world Jewry because all Jews in virtually all countries are undergoing the ravages of a common set of conditions from which they vainly seek relief," Mr. Lestshinsky points out that:

Though in some places political rather than economic factors aggravate the Jewish condition, everywhere Jews are experiencing the same stages of declassing, displacement, and pauperization. . . . Notwithstanding the wide diversification of Jewish life under differing political and economic conditions, both the intensity and the peculiarity of the Jewish crisis sprang from identical sources: detachment from the soil, extra-territoriality, and the state of

being a minority in every country. The "unnatural" social structure of Jewry (a result of two thousand years of exile) is responsible for the disproportionate number of Jews to be found in those social classes which become the first and greatest victims in our transition period.

Contending that the Jew has been able to achieve a rational relation to the societies of which he finds himself a member only during those periods when the general economy is expanding, and wide opportunities to enter new occupations and professions are offered, Mr. Lestshinsky insists that in the present era, when the opposite tendency is to be observed on all sides—that is, the general economy is contracting and efforts are constantly being made by avowed and pseudo-fascist groups to stabilize the existing society by forcing an equilibrium—the Jews are the first and foremost victims of any "eliminations" that must be made. As Mr. Lestshinsky concludes:

. . . whereas the social differentiation during the first period of capitalism created conditions favorable for economic absorption of the several classes of Jewry, the Fascist national integration in the period of capitalistic decay again displaces the Jews from the state framework of the majority nation, isolates them economically and politically from the related social classes, and excludes them from the culture of the majority. . . . As the misery of the Jewish masses grows in scope and intensity and assumes the aspects of catastrophe for whole groups and classes, it becomes more evident that the basic economic foundations of Jewry have been shattered.

It is but natural that the consequences of this general drift should appear unevenly in the western world, their intensity being directly related to the state of health or decay of the surrounding economy. Nevertheless, since the Jews are, as a group though not uniformly as individuals, exceedingly responsive to the situation of their fellows in foreign lands, the carrying of the process to its ultimate culmination in one land, Germany, has its repercussions in all lands. In those nations where conditions are best, this may take the form of an intensification of what can only be described as Jewish "national" feeling—a return to the Jewish culture and to "Jewishness" generally on the part of individuals previously wholly or partly assimilated into the surrounding population on the one hand, and an emotional concentration on the construction of a Jewish state in Palestine on the other. The third line has, as yet, enlisted the sympathies of but a limited proportion of the Jewish people, the joining of movements whose ultimate aspiration it is to reconstruct the world along new lines and set in train the forces of expansion once more. This is to be expected among a people which is, as Mr. Lestshinsky also emphasized in his argument, to an extraordinary degree "middle class."

Continued Anti-Semitism. The economic basis of the contemporary Jewish crisis is thus clearly underlined but that does not explain away the fact of anti-Semitism. This form of social neurosis would seem as impervious to argumentation and dissolving analysis as other social neuroses of similar scope and intensity. The criminal libel case at Berne, Switzerland, arising out of the circulation by Nazi groups in Switzerland of the "Protocols of Zion," to which reference was made on page 342 of THE INTERNATIONAL YEAR BOOK for 1934, came to a close on May 14, 1935, when President Justice Mayers found the documents to be "obvious forgeries" and "libellous," and the libel of a criminal nature because it was "intended to incite popular passion against a portion of the population and hence calculated to lead to agitation and violence." The action was brought by the Union of Jewish Communities in Switzerland and the Jewish Community of Berne against the Swiss National Socialist Party.

In the course of the trial, Col. Ulrich Fleischer, as a Nazi expert, testified that the Stresa agreement among Great Britain, France, and Italy, the Kellogg-Briand Pact, and President Wilson's fourteen points at Versailles were "the work of Jews" and evidence of Jewish determination to dominate the world. In tracing the history of the forgeries from 1905 when they were concocted by Sergius Nilus by plagiarizing a French satirical attack upon the government of Napoleon III, printed in Belgium in 1864, the prosecution pointed out that they had been freely used by the White Russians, especially General Denikine, to explain the fall of Czarism and by Adolf Hitler in *Mein Kampf*. It was pointed out also that they had been printed in the United States as late as 1920 (at Boston), and had been translated into Greek, Lithuanian, Hungarian, Spanish, Egyptian, and Arabic. In present-day Germany they are freely used as authentic material by Alfred Rosenberg and Julius Streicher. Nothing better illustrates the world-wide nature of anti-Semitism, nor the quality of the arguments used to advance it.

Palestine. Jewish affairs in Palestine continued to prosper during 1935, the three outstanding "issues" of the year being (1) the general protest against the limitations upon the number of immigrants that could be legally admitted, as determined under the mandate by the British authorities, the contention being that the condition of the land was now such that demand for population exceeded the supply; (2) the related problem of securing adequate capital to continue the economic developments underway or planned and considered necessary and feasible; and (3) the political issue of whether or not the Jews would vote for members of a legislative council.

High Commissioner Sir Arthur Grenfell Wauchope took over the government of the mandate five years ago with the purpose of bringing about an understanding between the Jews and the Arabs, and establishing the legislative council. In launching the latter, the High Commissioner said:

I wish to recall to your minds that, ever since the statement I made at Geneva three years ago, I have given much thought and have sought the opinions of others before deciding the lines on which the legislative council should be formed.

He summoned the Arab and Jewish leaders before him on separate days and laid the proposed scheme before them. Under it the council will consist of 28 members, made up of 14 Arabs, 7 Jews, and 7 British, a division based upon the population ratio of the various groups in the country (there are currently 750,000 Arabs and 350,000 Jews in Palestine). The Arabs asked for time to consider the matter and were expected to give their answer in January, 1936, while the Jews flatly refused to accept.

In subsequent press discussion, the Arabs alleged that the council lacked sufficient power to be of very great importance, since it is not to have the power to enact laws and hence is advisory only, and because the introduction of a budget is the exclusive privilege of the government. The Arabs also claimed that they were proportionately underrepresented. The Jews, on the other hand, raised both general and specific issues. Of the former, the most important was the claim that the proposed council will make it impossible any longer for the Jews of the world to think of Palestine as the place in which they are to find a national home under their exclusive rule; and deriving from this is the contention, advanced by Dr. Chaim Weizmann, leader of the Zionists, that the council will

undoubtedly jeopardize Jewish aims by interfering with the sale of lands, and immigration, both important to continued development. Specifically, the Jews advanced the arguments that the proposed council was contrary to the League of Nations mandate, and that the proviso that no revision be made in the composition of the council for five years is definitely hostile to the Jewish group which is now expanding rapidly and would do so even more if immigration restrictions were removed. The Jews therefore refused to participate in the elections.

Late in December, 1935, however, the Palestine government proclaimed the Council and announced that the High Commissioner would have wide veto powers over its acts. The proclamation was accompanied by the statement that if any section of the Palestinian population refuses to participate in the election of members, the High Commissioner is empowered to name British officials or other representatives to sit on the council. This latter announcement was interpreted as a direct reply to the Jewish leaders.

In spite of this political impasse and the dissatisfaction over the restrictions on immigration, the Jewish community in Palestine made considerable progress during the past year. It is announced that 52,000 Jews entered Palestine during the first ten months of 1935, and that the total number of German refugees, received during the last two years, reached 25,000 of whom 7000 have gone on the land. A special phase of this effort to relieve the pressure on the German Jews was the bringing of children to Palestine under the direction of Miss Henrietta Szold of the Haddassah. It is estimated that approximately 25 per cent of the total Jewish population earns its living by agriculture. Those on the land are organized into 358 communities scattered through Palestine proper, Emek, Judea, Samaria, Lower Galilee, Upper Galilee, and the Jordan Valley. Half of them are organized on the voluntary cooperative principle, whether in Kvutzah, in which all property is held in common, or Moshav, in which there is private property in all things except the land.

All members of the cooperatives must be members of the Histadrut (General Federation of Labor). The Histadrut had a membership of 72,000, according to a census taken late in 1935, or one-fourth of the Jewish population of Palestine, if wives and children are added in. In addition to its work in the cooperatives, the Histadrut engages in general labor organizing, and during the last year organized the upholsterers, broommakers, food workers, photographers, musicians, and maritime workers. It pressed the government to enact a minimum wage act, a bill compelling employers to give notice before discharging a worker, and a bill obligating the employer to provide the worker with a certificate stating whether the worker left voluntarily or was discharged.

It was promised that these laws would be enacted in the near future. Several strikes were held during the year, including those among clerks in stores, hotel and restaurant workers, municipal workers, women cardboard workers, workers employed by the Iraq Petroleum Company, and by the Haifa quarry. This organization seeks to strike up an alliance with the Arab workers through the Brit Poalei Eretz Is'rael (Alliance of Arab and Jewish Workers), and made progress during 1935 because of the importation of Arab workers from surrounding areas to keep down wages. The number of workers in manufacturing in Palestine in-

creased to 20,000 in 1935. In addition to its labor organizational activities, the Histadrut engages in social insurance, banking, consumer coöperation, housing, workers education, and publishing, as well as production coöperation as previously mentioned.

The Zionist Congress. A note of optimism was struck at the 19th Zionist Congress, held at Geneva in the fall of 1935. This Congress brought about the union of the various Zionist factions by agreeing to a coalition World Zionist Executive. Its composition was as follows: Dr. Chaim Weizmann, World Zionist President, David Ben Gurion (labor), Moshe Shertok (labor), Prof. Selig Brodetsky (General Zionist A), Isaac Gruenbaum (General Zionist A), Dr. Rischel Rottenstreich (General Zionist B), and Rabbi J. L. Fishman (Mizrachi). Dr. Arthur Ruppin was named director of Economic Research, Dr. Nahum Goldmann, representative at the League of Nations, and Louis Lipsky, representative of the Executive in the United States.

Among the more significant resolutions adopted at this Conference were those vigorously condemning "the systematic deprivation of German Jews of their rights"; reaffirming "the determination of the Jewish people to live and cooperate in harmony with the Arab population throughout the East"; refusing to coöperate in the establishment of the legislative council in Palestine (see above); regretting that "the facilities for the admission of Jewish immigrants (into Palestine) lag considerably behind the country's actual requirements"; calling for the coördination of Hakshara work (preparatory agricultural training for immigrants); appealing to all Jewish employers to adhere to the principle of employing Jewish labor in Palestine; deploring the rise of land speculation in Palestine; urging the centralization of Palestine schools with autonomy for those of the principal educational groups; affirming that all Zionists must, to remain in the organization, accept the principles laid down in the resolutions; and declaring that "in view of the catastrophic economic position of the Jewish masses in Eastern Europe," a world Jewish Congress, the first in Jewish history, should be arranged in 1936.

Germany. On Sept. 15, 1935, it was announced that the Reichstag meeting at Nuremberg had passed a series of laws which would indicate the nature of the measures to be taken finally to "liquidate" the Jews in Germany. Although the year ended without a formal and official promulgation of these laws, speculation as to their content was constant, and it was openly alleged that the delay was attributable to the reluctance of the Nazi leaders (a) to indicate that Dr. Hjalmar Schacht, Minister of Economics, had suffered final defeat in his campaign to make the point that continued persecution of the Jews was intensifying economic difficulties; and (b) to reveal the extremes to which the Third Reich was prepared to go when anti-Olympic participation agitation was running high in foreign countries.

Nevertheless, it was generally understood that the laws embodied the following points: (1) Jews are no longer to be considered citizens of the Third Reich; (2) Jews are no longer to be permitted to hold public office, including judgeships, notaryships, positions as public auctioneers or even memberships in civil or criminal juries; (3) membership in the state will be granted to all persons except "open enemies of the state, criminals and Jews"; (4) no male can achieve citizenship with-

out labor camp and army service, both of which are denied to Jews. However, whether or not these points adequately cover the Nuremberg laws, the fact that Jews are suffering increasing economic disabilities in Germany is beyond question.

Reports indicate that while the Reich authorities disapprove of the continued persecution of the Jews before the content of the Nuremberg laws is made public, it goes on with steadily increasing virulence and is especially destructive in provincial towns and cities with Jewish groups so small that they cannot maintain a self-sufficient life. This circumstance is forcing many Jews into starvation as they cannot purchase the necessities of life at local stores. Moreover and increasingly the Jews are being forced out of business without being given an opportunity to sell their properties, thus reducing them to beggary. The leading German anti-Semite, Julius Streicher, has even advocated that his followers boycott all newspapers offering Jewish properties for sale.

While this campaign is chiefly applicable to petty shopkeepers, it is also known to have extended to the expropriation of the Jewish owners of an arms plant employing 3000 persons and specializing in peace time in the production of bicycles and baby carriages. This property was taken over by the State of Thuringia from the Simson Company and to commemorate the event 1000 baby carriages were distributed to local families having four or more children. Jews are also being driven out of business by refusing to renew licenses as they expire, a measure recently applied to traveling salesmen, and by the application of stringent coördination measures to special categories of business, such as drugs, art objects, and moving pictures. Since the limitations on Jews in the professions have become so extensive, the quotas established for university attendance have become a minor issue, as there is no longer much incentive to attend.

However, the increasingly common policy of segregating Jewish and "Aryan" students in the lower schools is causing great hardships and is increasing the anti-Semitism among children and adolescents. At the end of the year a severe unemployment crisis developed in the field of domestic and personal service as the law forbidding any Jewish household to employ an "Aryan" domestic under 45 years of age went into effect and thousands were discharged. While all received one month's pay on the conclusion of service, they do not come under the unemployment insurance benefits and their condition will shortly be serious. At the other end of the economic scale, it was observed that the pressure on Jewish businesses to quit operations was having a depressing effect on the stock exchange and that the "flight of capital" from Germany was continuing unabated in spite of official measures to stop it.

The Olympics Boycott. In the world at large, the efforts to ease the situation of the German Jews assumed two forms, (a) a wide-spread protest against participation in the Olympic Games to be held at Berlin in 1936; and (b) assisting the victims of the Nazi measures to emigrate. The former agitation took the form of a highly organized campaign in the United States, both within and without the official Olympics organization. In the latter, the forces working for a boycott of the games met with defeat, in spite of the fact that the protest was in effect a united front of Jews, Catholics, Protestants, and non-sectarian groups, as well as political liberals, Socialists, and Communists. Some effort was

made to stem the rising tide of opposition to coöperation with the Nazi's by alleging that *all* opposition was Communist-inspired, a statement that led to jeers in conservative church journals. But while the official Olympics committee decided in favor of participation, and laid its plans to carry out its decision, the campaign continued as the year came to a close in an effort to influence individual contestants.

Assisted Emigration. With regard to assisted emigration, the work of two organizations may be reviewed. The American Joint Distribution Committee announced that between the spring of 1933 and September, 1935, it spent \$902,000 on its relief programme within Germany and \$947,000 in the refugee countries which included Holland, Belgium, France, Poland, and Czechoslovakia. It estimated that 65,000 Jews have left Germany since the Hitler régime came to power. In addition to relief work, this committee gave educational training to 20,000 Jewish children in Germany and vocational training to 13,000 Jewish youths. Employment bureaus established found work for 16,000 applicants.

Early in 1935 the League of Nations High Commission for Refugees from Germany announced that it had a discouraging situation on its hands. The position of the refugees was made difficult not only by their appalling destitution but by the fact that the police were not well-advised as to the status of these persons, and, because of unemployment, it was difficult to obtain work permits for them. The only country excepted from these observations was the United States. There seems little prospect of absorbing the refugees permanently in European countries, but the High Commissioner, James G. McDonald, was hopeful of finding outlets in Latin America during 1935. An especially difficult problem was that posed by old people unable to work even if work can be found. At the time of this report (February, 1935) it was estimated that there were 80,000 refugees under care, including 3000 from Saarland, of whom about 28,000 were to be settled overseas, 6000 absorbed in Western Europe, 18,000 repatriated to Central and Eastern European countries, and 25,000 for whom no provision was in sight.

The McDonald Report. That the situation did not clear up was apparent when Commissioner McDonald resigned in December, 1935. His resignation took the form of a long letter to the Secretary General of the League of Nations and it was in effect a devastating indictment of the German Government. Some selections from this document follow.

Apart from all questions of principle and of religious persecution, one portentous fact confronts the community of states. More than half a million persons, against whom no charge can be made except that they are not what the National Socialists choose to regard as "Nordic," are being crushed. They cannot escape oppression by any act of their own free-will, for what has been called "the membership of non-Aryan race" cannot be changed or kept in abeyance. . . .

Progress has been made during the last three years in settling the refugees from Germany. Of the more than 80,000 who have already left the Reich, approximately three-fourths have now found new homes—more than half of these in Palestine—or have been repatriated to their countries of origin. This accomplishment has been primarily the work of refugees themselves and of the philanthropic organizations—Jewish and Christian—whose devoted labors have been ceaselessly carried on in many parts of the world. Probably not more than 15,000 refugees now remain unplaced. . . .

The care and the settlement of these remaining thousands of refugees could and would be borne by the already heavily burdened private organizations were they not fearful that the number of refugees may be increased many times by new flights from Germany.

The facts which arouse these apprehensions are indisputable. They are evidenced clearly in the German laws, decrees, judicial decisions and party pronouncements, and practices during the last two years. The culmination of these attacks on the Jews, the Christian "non-Aryans," and the political and religious dissenters was the new legislation announced at the Party Congress at Nuremberg last September. The core of that enactment was the law limiting citizenship to those who are "of German or cognate blood, and who also conform to the National Socialist conception of loyalty to the state. As the direct result in Germany not only the Jews, who now number about 435,000, but also tens of thousands of Christian "non-Aryans," who are classified as Jews, lost their citizenship, were disfranchised, and made ineligible to hold public office. Indirectly, through this new law, a constitutional basis was laid for unrestricted discriminations against all those whom the party may wish to penalize.

The denationalization by the German Government of thousands of German citizens has added to the hardships both of those remaining in Germany and of the refugees, and is an increasing burden on states which have admitted the refugees while in possession of German nationality.

Relentlessly the Jews and "non-Aryans" are excluded from all public offices, from the exercise of the liberal professions, and from any part in the cultural and intellectual life of Germany. Ostracized from social relations with "Aryans," they are subjected to every kind of humiliation. Neither sex nor age exempts them from discrimination. Even the Jewish and "non-Aryan" children do not escape cruel forms of segregation and persecution. In party publications, directly sponsored by the government, "Aryan" children are stirred to hate the Jews and the Christian "non-Aryans," to spy upon them and to attack them, and to incite their own parents to extirpate the Jews altogether.

It is being made increasingly difficult for Jews and "non-Aryans" in Germany to sustain life. Condemned to segregation within the four corners of the legal and social Ghetto, which has now closed upon them, they are increasingly prevented from earning their living. Indeed, more than half of the Jews remaining in Germany have already been deprived of their livelihood. In many parts of the country there is a systematic attempt at starvation of the Jewish population. In no field of economic activity is there any security whatsoever. For some time it has been impossible for Jewish business men and shopkeepers to carry on their trades in small towns. The campaign against any dealings with Jews is now systematically prosecuted in the larger towns. Despite the restrictions upon migration from the provinces into the few largest cities where Jewish economic activity is not yet completely excluded, the Jews are fleeing to those cities because there only can they hope to escape, at least for a time, from the more brutal forms of persecution.

This influx has exhausted already the resources of the Jewish philanthropic and educational institutions in Germany. The victims of the terrorism are being driven to the point where, in utter anguish and despair, they may burst the frontiers in fresh waves of refugees.

Again, as so often during their long heroic and tragic history, the Jewish people are used as the scapegoat for political and partisan purposes. The National Socialists level against them charges of the most outrageous and untenable kind. They ignore all of the facts of the continuous loyalty of the Jews in Germany; for example, during the empire when Jews helped to unify Germany and to make it strong; during the war, when a percentage of Jewish youth as high as that of any other religious community in the Reich gave their lives for the Fatherland, and Jewish scientists and men of affairs helped so notably to enable Germany to prolong the struggle; and under the republic, when Jewish leaders aided in saving Germany from some of the worst effects of defeat.

Instead, it has been found useful to attribute to the Jews the responsibility for the misery and dejection which the German people suffered during the last years of the war and the decade that followed. Though less than a one-hundredth part of the total population, the Jews are held responsible for all the adversity which the German people had to undergo. As in the Middle Ages, when they were massacred and expelled from German states as the cause of the Black Death, so today they are eliminated from the economic and cultural life of Germany and degraded on the ground that they were the cause of the German humiliation. So far does this hatred extend that even the Jewish war veterans, who fought and were wounded in the front-line trenches, have been forced from their positions in the public services, and the names of the Jewish war dead may no longer be engraved on war memorials.

The developments since 1933, and in particular those following the Nuremberg legislation, call for fresh collective action in regard to the problem created by persecution in Germany. The moral authority of the League of Nations and of states members of the League must be directed toward a determined appeal to the German Government in the name of humanity and of the principles of the public law of Europe. They must ask for a modification of policies which constitute a source of unrest and perplexity

in the world, a challenge to the conscience of mankind, and a menace to the legitimate interests of the states affected by the immigration of German refugees.

Pity and reason alike must inspire the hope that intercession will meet with response. Without such response, the problems caused by the persecution of the Jews and the "non-Aryans" will not be solved by philanthropic action, but will continue to constitute a danger to international peace and a source of injury to the legitimate interests of other states.

This document was not published in Germany, the government maintained an official ignorance of its contents, and the semi-official *Nazi Party Correspondence* summed up the probable attitude that would be taken in the declaration, "Germany is a sovereign state like other powers and will not endure interference with her internal problems."

Other Countries. The U.S.S.R. has set aside 18,000,000 acres in Biro-Bidjan, located in south-eastern Siberia on the Manchurian border as a refuge for Jews and has promised to erect it into a "Jewish autonomous region" when the Jewish population reaches 25,000. This region is described as being comparable in climate to southern Canada, having a rainy season of six or eight weeks in mid-summer, and plenty of snow. At present the population of the region is 50,000 of whom 12,000 are Jews and the rest, in descending order of importance, Russians, Koreans, Ukrainians, and Chinese. In December the American Committee for Settlement of Jews in Biro-Bidjan announced that it was initiating a campaign to raise \$500,000 to aid in settling German, Polish, and other non-Russian Jews in the area.

The intensity of the German anti-Semitic campaign has tended to deflect attention from conditions in Poland, Hungary, Rumania, Austria, and other countries where the attitude, while not official with the government, is persistent and destructive. Anti-Semitic activities in Poland reached the stage of riots closely resembling pogroms at several times during the year under the leadership of a group known as Endeks, the members of which are associated with the National Democratic Party of Poland. The usual methods of attack used are the picketing of Jewish shops and assault.

From the spring of 1933 to September, 1935, the American Jewish Joint Distribution Committee expended \$805,000 on relief in Poland and other Eastern European countries. The January, 1936, issue of the magazine *Fortune* carried the results of a nation-wide poll on various questions one of which read, "Do you believe that in the long run Germany will be better or worse off if it drives out the Jews?" The summary of the findings on this point was as follows:

Obviously, in no part of the country is anti-Semitism at present strong enough to count politically. The smallest amount was to be found in the Southeast and the West, where there are very few Jews. On the other hand, in the Northeast, where 70 per cent of the American-Jewish population is concentrated, the percentage opposed to the Jews was only 15.1, and was actually less than that in the Midwest.

JOHNS HOPKINS UNIVERSITY, THE. A nonsectarian institution of higher education for men and women in Baltimore, Md., founded in 1876. The enrollment for the autumn of 1935 was 4291, distributed as follows: School of higher studies of the faculty of philosophy, 364; school of higher studies in education, 35; school of engineering, 24 (graduate), 251 (undergraduate); college of arts and sciences, 474; school of business economics, 86; school of medicine, 283; school of hygiene and public health, 113; afternoon and evening courses, 2392. The enrollment in the 1935 summer session was 940. The faculty numbered 680. The

productive funds amounted to \$26,834,827.39, and the income from all sources for 1934-35 was \$2,454,408.62. The main library contained 472,024 volumes. President, Isaiah Bowman, Ph.D., LL.D.

JOHNSON ACT. See INTERNATIONAL BANKING.

JOHORE. See UNFEDERATED MALAY STATES.

JOUVENAL, zhōō'v-nāl', HENRI DE. A French diplomat, died Oct. 4, 1935, in Paris, where he was born, Apr. 2, 1876. In 1900 he was secretary of the committee of democratic conferences, becoming head of the cabinet of the Ministry of Justice in 1902 and director of the cabinet in the Ministry of Commerce, three years later. Subsequently he entered the journalistic field, becoming a special correspondent for *Le Matin*, and eventually the editor of that paper. From 1927 to 1932 he edited *Revue des Vivants*.

In 1921, M. de Jouvenal was elected senator for the Corrèze, and the following year named as a delegate to the League of Nations, being instrumental in electing Abyssinia (Ethiopia) to the League. He served in this capacity also in 1924 and 1925. In the second Poincaré cabinet of 1924 he was Minister of Education, and in the following year was appointed successor to General Sarraill as High Commissioner in Syria. During his incumbency, he suppressed the revolt of the Druses in a high-handed manner and refused to treat with them unless they surrendered unconditionally. He served for one year being replaced by Auguste Henri Bonsat. In the following year he addressed the War Danger Conference in London, saying in part that 1935 would be a crucial year in Europe.

M. de Jouvenal became secretary-general (1931) of the Congress on Disarmament held in Paris, and in 1932 was appointed Ambassador to Italy. As such he signed the four-power pact of Italy, Great Britain, France, and Germany at the Palazzo Venezia in Rome, July 15, 1933. This pact represented somewhat of a triumph for him as on his entry into Rome in 1932 he was received with considerable coolness. In the second Daladier cabinet, January-February, 1934, M. de Jouvenal served as Colonial Minister, and later in that year became head of the French Congress for the Defense of Peace.

He was the author of *La vie orageuse de Mirabeau*, which was translated into English; *Huit cent ans de Révolution Française*, 1789-1789; *La Paix Française*. His first wife was Mme. Colette, the novelist, but the marriage was ended by divorce.

JUNIOR COLLEGES. See UNIVERSITIES AND COLLEGES.

JUNKERS, yōōngk'ers, HUGO. A German engineer, died at Munich, February 3. Born at Rheydt, Prussia, Feb. 3, 1859, he received a gymnasium education and attended engineering schools in Berlin, Karlsruhe, and Aachen. At the age of 25 he became a government engineer, and during his spare time devoted himself to making experiments in the field of heating engineering, becoming a partner of the German engineer Oechelhaeuser in 1889. One of his inventions in this field was the Junkers-Kalorimeter, a thermometer for measuring minutely a motor's heating power during combustion, which he patented in 1892. In 1895 he started Junkers & Company at Dessau to make heating apparatus, particularly portable gas stoves. In the following year, his business not being very successful, he accepted a professorship at the Technical High School at Aachen, where he lectured on radiation and pyrotechnics for 14 years. In 1902 he founded the Research Institute for oil engines at Aachen,

and in 1908 established the Kalorifer Works there, which were removed to Dessau six years later. With his combined incomes, he again devoted himself to experimentation, specializing in oil-driven motors and heavier-than-air designs.

In 1907, Junkers patented a motor, which although not entirely successful, proved to him certain theories relating to motors operated by petroleum products. In 1911 he gave up his professorship in order to devote all his time to combining an oil-driven motor and an aeroplane, the result being the first all-metal plane to fly successfully. Subsequently, he experimented with gas motors, and in 1913 he was satisfied that he had a motor which could compete with any in the aeronautical world. He established a motor plant at Magdeburg, from which the Junkers Motor Works at Dessau grew, and at the outbreak of the World War he was able to supply the German Government with convincing blueprints and equipment. An agreement made at this time, gave the Government a share in the Junkers Aircraft Company until 1926. His first metal plane was made of sheet iron, but because of the need of light, speedy planes, their production was curtailed. In 1915 he established a Research Institute at Dessau, and two years later the Junkers-Fokker Works were organized, from 1919 being known as Junkers-Flugzeugwerk Aktien-Gesellschaft.

According to the terms of the peace treaty at the end of the War, Junkers was compelled to close his works at Dessau for one year, yet by 1924 he was able to take over the Lufthansa, one of the major German air lines, and to become foremost in commercial aviation. He was instrumental in forming one of the first regular mail and passenger air lines in the world in an agreement between Germany and several other European governments.

The output of the Works for 1928 was 1000 machines, and in April of that year the flight of Capt. Hermann Koehl, Comdt. James Fitzmaurice, and Baron Gunther von Huenfeld in the Junkers monoplane *Brennen* from Europe to America (see NEW INTERNATIONAL YEAR BOOK, 1928) assured their fame. In the 1920's these planes were standard equipment on commercial aviation routes, and when passengers increased, Junkers began to build larger planes to meet the demand. One of these was the G-38, the largest in the world, built to carry 100 passengers, a pilot, a navigator, a crew of 10 and hundreds of pounds of mail. Another was the "flying restaurant," G-31, and another the smaller F-13, the standard on all air routes until a newer model replaced it. In 1930, he designed an oil motor capable of lifting the G-38 with her 240-foot wing spread. In 1932, as a result of the general industrial depression, the Junkers firm applied for a one-year moratorium. At the end of this time, all the creditors were satisfied, and shortly afterwards, Dr. Junkers retired to private life. He published a number of aero-technical papers in German and American publications.

KANSAS. Population. On Apr. 1, 1930 (Fifteenth Census), 1,880,999; on July 1, 1934, by latest Federal estimate, 1,905,000; 1920 (Census), 1,769,257. Kansas City (1930) had 121,857 inhabitants; Wichita, 111,110; Topeka, the capital, 64,120.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Mineral Production. Despite the restrictions imposed by Federal authority, the production of petroleum in the State mounted in 1934 to a yearly total of 46,555,000 barrels, from 41,976,000 for 1933.

Crop	Year	Acreage	Prod. Bu.	Value
Wheat	1935	6,589,000	59,951,000	\$53,359,000
	1934	8,669,000	79,700,000	66,946,000
Corn	1935	4,608,000	34,560,000	24,192,000
	1934	3,777,000	10,576,000	10,259,000
Hay (tame) ...	1935	1,155,000	1,816,000*	11,804,000
	1934	950,000	861,000*	14,034,000
Oats	1935	1,548,000	41,022,000	13,947,000
	1934	1,238,000	16,094,000	7,886,000
Grain sorghum .	1935	1,988,000	9,940,000	6,461,000
	1934	1,205,000	3,615,000	3,904,000
Barley	1935	313,000	4,538,000	2,405,000
	1934	265,000	1,988,000	1,272,000
Potatoes	1935	35,000	2,625,000	1,444,000
	1934	37,000	1,480,000	1,184,000

* Tons

The total for 1934 established a record, exceeding the 45,451,000 barrels of 1918. The increase resulted mainly from the bringing of 591 new wells into production. Their aggregate initial flow was stated as approximately 300,000 barrels a day. Reno County led in successful drilling, chiefly in the prolific Haury-Burton field. The production of coal in 1934, stated in the figures of the Federal Department of the Interior jointly with that of Missouri showed a rise of 2.7 per cent above the joint total for 1933, in which year 2,717,622 net tons were mined in Kansas. The quantity of Kansas salt sold or used by producers rose to 768,133 short tons (1934) from 732,947 (1933); the corresponding value, however, fell off slightly to \$2,949,930 (1934) from \$3,039,343 (1933). There were mined, in 1934, 38,261 short tons of zinc, as against 40,947 in 1933; the totals by value were \$3,290,446 (1934) and \$3,439,548 (1933).

Education. Schools in the State, according to the *Journal* of the National Education Association, still widely suffered need of money in 1935, for lack of sources of income outside the tax on property. The schools participated in a movement, among many States, to instruct pupils in matters pertaining to physical safety.

Charities and Corrections. A Board of Administration exercised central control over State institutions, charitable, correctional, and of special educational types, under the system in force in 1935.

The charitable institutions, and their approximate populations in 1935 were: State hospitals for mental disorder, at Topeka (1841), Osawatimie (1653), and Larned (1058); State Hospital for Epileptics (799), at Parsons; State Training School (feeble-minded: 1105), Winfield; State Sanatorium for Tuberculosis (264), Norton; State Orphans' Home (191), Atchison. The correctional institutions were: State Penitentiary (1980), Lansing; State Industrial Reformatory (ages from 16 to 25: 678), Hutchinson; Women's Industrial Farm (100), Lansing; Boys' Industrial School (from 11 to 16 years: 250), Topeka; Girls' Industrial School (from 11 to 18 years: 150), Beloit. Educational institutions under the Board were: School for the Blind (118), Kansas City; School for the Deaf (250), Olathe; Western University (Negroes: 130), and Kansas Vocational School (Negroes: 114), both at Topeka.

Legislation. The application of the State's farm-mortgage moratorium was extended. The Legislature voted to restore capital punishment for murder in the first degree. The "time privilege" of State prisoners, by which they could reduce their terms by mining more coal than their quotas, in the Penitentiary mine at Lansing, was rescinded.

Political and Other Events. The policy adopted by Governor Landon in 1933, of making no expenditures in excess of the State's actually received

revenue, was continued and proved its merit. The accounts of the fiscal year ended with June 30 showed that in spite of the State's experience of drought within that period, expenditure had kept within revenue. It had been necessary to reduce the expenditure of the State departments by 25 per cent, a step that had been feared as likely to impair their operation.

A group of 347 convicts mutinied on June 18, seized guards as hostages and held the interior of the Penitentiary coal mine. They were smoked out the next day by the guards' reversing the ventilating fans and forcing back into the mine the smoke from fires that the mutineers had set in the interior. The mutiny was attributed in part at least to the Legislature's cancellation of the prisoners' "time privilege." See DUST STORMS; FLOODS.

Officers. The chief officers of the State, serving in 1935, were: Governor, Alfred M. Landon; Lieutenant-Governor, Charles W. Thompson; Secretary of State, Frank J. Ryan; Auditor, George Robb; Treasurer, J. J. Rhodes; Attorney-General, Clarence V. Beck; Superintendent of Public Instruction, W. T. Markham.

Judiciary. Supreme Court: Chief Justice, R. A. Burch; Justices, John S. Dawson, W. W. Harvey, William E. Hutchison, William A. Smith, Walter G. Thiele, Hugo Weddell.

KANSAS, UNIVERSITY OF. A State institution of higher education in Lawrence, Kan., founded in 1864. The 1935 enrollment was 4246, of whom 2919 were men and 1327 women. The 1935 summer session had an enrollment of 1210. The full-time teaching staff, exclusive of deans, numbered 240. The endowment fund amounted to \$240,000, and the income for the year was \$1,500,000. There were 268,000 volumes in the library. Important gifts during the past year: \$60,000 for Children's Ward and \$35,000 for Research Laboratory at School of Medicine. Chancellor, Ernest Hiram Lindley, Ph.D.

KANSAS WESLEYAN UNIVERSITY. A coeducational institution under the auspices of the Methodist Episcopal Church, in Salina, Kan., founded in 1885. The enrollment for the autumn of 1934-35 was 393. The faculty numbered 25. The endowment amounted to \$226,000, while the budget for the fiscal year ending July 31, 1935, showed an income of \$67,000. President, L. B. Bowers, LL.D.

KARAFUTO, ka'ra-fō'ō. The Japanese part of the island of Sakhalin, south of 50° N. Area, 13,934 sq. miles; population (1933), 300,298. Chief towns: Toyohara, the capital, 33,744 inhabitants; Otamari, 30,561; Esutoru, 21,043; Shirutoru, 18,887.

Production, etc. For 1934, farm products were valued at ¥5,325,000; marine products, ¥15,673,760; coal produced totaled 1,196,647 tons. In the same year, 141,842 metric of pulp and 146,832 metric tons of paper were produced. Livestock (1934): 12,649 horses, 8592 swine, 4929 cattle, and 7137 foxes. In 1933, total imports were valued at ¥31,689,774; exports, ¥73,563,407. Budget estimates were balanced at ¥25,929,056 for 1934-35, and at ¥28,703,053 for 1935-36 (yen averaged \$0.2871 for 1935, and \$0.2972 for 1934). Governor, Takeshi Imamura.

KARA-KALPAK A.S.S.R. See SOVIET CENTRAL ASIA.

KARELIA. See FINLAND under History.

KARIKAL. See FRENCH INDIA.

KEDAH. See UNFEDERATED MALAY STATES.

KEELING ISLANDS. See STRAITS SETTLEMENTS.

KEEWATIN. See NORTHWEST TERRITORIES.

KELANTIN. See UNFEDERATED MALAY STATES.

KELLOGG-BRIAND PACT. See PEACE.

KENDAL, DAME MADGE (MRS. MARGARET ROBERTSON GRIMSTON). An English actress, died at Chorley Wood, Herts., Sept. 14, 1935. Born in Grimsby, Linc., Mar. 15, 1848, of a theatrical family, her first appearance was made at the old Marylebone Theatre, Feb. 20, 1854, as the child Marie in *The Struggle for Gold*. She played children's rôles for several years, appearing as Eva in *Uncle Tom's Cabin* at the Theatre Royal, Bristol, in 1885. Her London début was made at the age of 17, when she played Ophelia opposite Walter Montgomery as Hamlet at the Haymarket Theatre, July 29, 1865.

She remained with Montgomery for several seasons, playing Desdemona in *Othello*, Blanche in *King John*, and Jessica in *The Merchant of Venice*. In 1867 she was married to W. H. Kendal (Grimston), and appeared in London in various rôles, including that of Georgina in *Our American Cousin* with E. A. Sothorn. In the following year, at the opening of the Gaiety Theatre, December 21, she played Florence in *On the Cards*. She then toured with the Haymarket Company and portrayed such rôles as Viola, Rosalind, Lady Teazle, Kate Hardcastle, and Lydia Languish, remaining with that Company until 1874. In November of that year she and her husband went on tour, appearing in the following year at the Opéra Comique and the Gaiety theatres.

Mrs. Kendal then appeared at the Court Theatre with John Hare, her husband's partner, playing *A Scrap of Paper* and other plays. Her next appearance was with the Bancrofts at the Prince of Wales's Theatre in 1876, where she played in various rôles, including one of her greatest, that of Dora in the English version of Sardou's *Diplomacy*. She returned to the Court Theatre in January, 1879, and in October appeared under the management of her husband and Hare at the St. James's Theatre. On Feb. 1, 1887, she appeared in a command performance of *Uncle Will* for Queen Victoria. The agreement with Hare was ended in July, 1888, and in the autumn of that year she and her husband went on a tour that began many years of travelling throughout the provinces and America, with a return home every year or two to play on the London boards. In 1889, Mr. and Mrs. Kendal came to America, where Mrs. Kendal played in *A Scrap of Paper* at the Fifth Avenue Theatre in New York City. During this period she added such rôles as Paula in *The Second Mrs. Tanqueray*, Miriam Chisholm in *The Fall of the Leaf*, and Mrs. Armitage in *The Greatest of These*—to her repertory. In June of 1902 she was back in London and appeared with Beerbohm Tree and Ellen Terry as Mistress Ford in *The Merry Wives of Windsor*. She now divided her time between the road and London, retiring from the stage in 1908, her last rôle being that of Madame Armirès in *The House of Clay*.

She returned to the stage in 1911 to appear as Mistress Ford in a scene from *The Merry Wives of Windsor* at the Gala Performance. In 1926 she was made Dame Commander of the British Empire, and the following year received the Grand Cross of the Order. Her memoirs, *Dame Madge Kendal by Herself*, were published in 1933.

KENTUCKY. Population. On Apr. 1, 1930 (Fifteenth Census), 2,614,589; on July 1, 1934, by latest Federal estimate, 2,657,000; 1920 (Census), 2,416,630. Louisville, the chief city, had (1930) 307,745 inhabitants; Frankfort, the capital, 11,626.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Tobacco	1935	311,000	247,429,000*	\$37,481,000
	1934	323,000	250,605,000*	36,677,000
Corn	1935	2,566,000	59,018,000	44,264,000
	1934	2,618,000	62,832,000	50,894,000
Hay (tame)	1935	1,152,000	1,374,000*	12,916,000
	1934	1,175,000	1,202,000*	16,227,000
Wheat	1935	326,000	3,097,000	2,540,000
	1934	308,000	4,250,000	3,782,000
Potatoes	1935	67,000	5,762,000	4,322,000
	1934	64,000	4,480,000	3,584,000
Sweet potatoes ..	1935	22,000	1,760,000	1,232,000
	1934	19,000	1,805,000	1,318,000

* Pounds. † Tons.

Mineral Production. The mining of coal increased for the State as a whole, to a total quantity of 40,478,000 net tons for 1935, from 38,525,235 tons for 1934. The eastern field shipped in 1934 some 3,500,000 tons of coal to other States for coking.

The completion of some 236 new producing wells, for the most part in Ohio County, brought the year's yield of petroleum up to 4,851,000 barrels for 1934, from 4,608,000 for 1933. There was a growing industry in the mining of fluorspar, chiefly for use as a flux in metallurgy and as a source of hydrofluoric acid. Forty-three thousand, one hundred and sixty-three short tons of fluorspar were shipped from the mines in the state in 1934; in value, \$690,990. More than half of the year's shipments from domestic mines came from Kentucky.

Education. The number of persons of school age in the State was reckoned, for the academic year 1934-35, as 762,810. The enrollments of pupils in the public schools in that year numbered 625,776. Of these, 529,210 were in the common schools or elementary grades, and 96,566 were in secondary grades, or high schools, which in some cases included the seventh grade. The year's expenditure for public-school education throughout the State totaled \$21,057,846. The year's salaries of the 18,126 teachers, principals, and supervisors totaled \$14,225,876 and averaged \$784.83.

Charities and Corrections. A Department of Public Welfare, as ordained by an act of 1932, managed in 1935 the State's seven institutions for the care or custody of persons. These institutions and their respective average populations for the year ended on June 30, 1935, were: Eastern State Hospital, Lexington, 1864; Central State Hospital, Lakeland, 2336; Western State Hospital, Hopkinsville, 1902; Feeble-Minded Institute, Frankfort, 740; Houses of Reform, Greendale, 543; State Reformatory, Frankfort, 2713; State Penitentiary, Eddyville, 1225.

Political and Other Events. Politically the State was disturbed by a conflict in the Democratic party over the nomination of a candidate for Governor, to succeed Laffoon in that office. Governor Laffoon backed Thomas S. Rhea. Lieut.-Gov. Albert B. Chandler sought the nomination in a primary campaign in which he attacked Laffoon, who had become unpopular because of his having brought about the imposition of a sales tax. Factional bitterness ran high in Harlan County, where the United Mine Workers of America, seeking to unionize the coal mines, complained of lawless conduct by the authorities. Laffoon sent 700 National Guards into the county, ostensibly to prevent violence and fraud at the primary election. His opponents charged him with a contrary purpose. The troops' interference with the election was enjoined by Cir-

cuit Judge Gilbert. The primary, held August 3, gave Rhea a slight State plurality over Chandler, not sufficient for nomination.

Troops were then withdrawn from Harlan County; some weeks later, on September 4, the county attorney, E. C. Middleton, who had given aid to the military, was assassinated by a bomb. On September 7 was held a run-off primary for the Democratic nomination, in which Chandler decisively defeated Rhea. Governor Laffoon and Rhea, resentful of what they considered aid given Chandler in the campaign by the Federal Administration, refused to meet President Roosevelt when he passed through the State on September 27, on his tour to the West. The Governor again sent troops into Harlan County on September 29, alleging lawless acts of violence on the part of deputy sheriffs in the pay of operators of coal mines.

Although the State continued to maintain, in name, until November, its constitutional prohibition of traffic in alcoholic liquor, that traffic was active throughout the year. Distilleries had gone back into business on a great scale (represented by an estimated investment of \$100,000,000) after the State's popular vote for repeal of Federal prohibition in 1933. A State act of 1934 had nullified the effect of the constitutional prohibition by classing liquor as medicine and allowing every man to prescribe this medicine for himself. There sprang up a widespread retail traffic in liquor, largely in areas where sentiment favored prohibition. Many such areas voted on local option in November. See **FLOODS**.

Elections. In the State elections of November 5 Lieut.-Gov. Albert B. Chandler, Democrat, was elected Governor, defeating King Swope, Republican, by a plurality of 80,000 or more votes in a total vote of over 1,000,000. The repeal of the State's constitutional prohibition of traffic in alcoholic beverages, proposed to the electorate by the Legislative session of 1934, was approved. Constitutional authority for the Legislature to enact a system of pensions for the aged was voted by a sweeping majority. A prevaillingly Democratic Legislature was elected.

Officers. The chief officers of the State, serving in 1935, were: Governor, Ruby Laffoon (succeeded Dec. 10 by A. B. Chandler); Lieutenant-Governor, A. B. Chandler (succeeded Dec. 10 by Keen Johnson); Secretary of State, Sara W. Mahan; Treasurer, Elam W. Huddleston; Auditor, J. Dan Talbott; Attorney-General, Bailey P. Wootton; Commissioner of Agriculture, Labor, and Statistics, Eugene Flowers; Superintendent of Public Instruction, James D. Richmond.

Judiciary. Court of Appeals: Chief Justice, William Rogers Clay; Associate Justices, William H. Rees, James W. Stites, Gus Thomas, J. Basil Richardson, Wesley Vick Perry, Alex L. Ratliff.

KENTUCKY, UNIVERSITY OF. A coeducational State institution of higher learning in Lexington, Ky., founded in 1866. The enrollment in the autumn of 1935 was 3175. There were 2145 students registered in the 1935 summer session. The faculty numbered 261. The productive funds amounted to \$184,075, and the income for the year was \$1,186,092.67. The library contained 145,000 volumes. President, Frank LeRond McVey, Ph.D., LL.D.

KENYA, kē-nyā' or kēn'ya. A British colony and protectorate. Area, 224,960 sq. miles; population (1934 estimate), 3,094,279 including 3,024,975 natives, 34,955 Indians, 17,501 Europeans, 12,131 Arabs, 3316 Goans, and 1401 others. Chief towns:

Nairobi (capital), 70,960 inhabitants; Mombasa, 52,700.

Production and Trade. Coffee, wheat, maize, tea, sugar, hides and skins, cotton, sisim, wattle bark, sodium carbonate, and gold (12,110 fine oz. produced during 1934) were the main products. Timber production (1934) from the forest reserves totaled 735,731 cu. ft. Kenya and Uganda were one administrative unit for customs purposes. During 1934, imports (Kenya and Uganda) totaled £5,708,025; exports (Kenya only), £1,909,871 of which coffee (186,759 cwt.) represented £491,759; sisal 24,016 tons), £311,371; hides and skins, £195,915; sodium carbonate, £141,000; maize, £104,754.

Government. For 1934, revenue amounted to £3,181,939; expenditure, £3,180,795; public debt (Jan. 1, 1935), £17,205,600 of which £13,251,808 was the capital debt of Kenya and Uganda railways and harbors. Government was vested in a governor aided by an executive council of 12 members, and a legislative council of 40 members including the governor as president. Governor in 1935, Brig.-Gen. Sir J. A. Byrne.

History. The proposals of the East African Unofficial Conference (held at Arusha during March, 1935) for partial union in East Africa (Kenya and Tanganyika) were rejected by the British Secretary of State for the Colonies on Oct. 28, 1935. He pointed out that, in 1931, the Parliamentary Joint Select Committee had thoroughly examined the question of the union of Kenya, Tanganyika, and Uganda and had decided against it. The government was of the opinion that no adequate grounds existed at the present time for reopening the matter.

On Oct. 7, 1935, the British Colonial Office announced that Sir Alan W. Pim had been appointed to investigate and report on the financial affairs of Kenya.

KENYON COLLEGE. A college of arts and sciences for men in Gambier, O., established in 1824 by the Protestant Episcopal Church. The enrollment for the autumn term of 1935 was 227. The faculty numbered 26 members, including a speech instructor, added in 1935. The endowment funds amounted to \$2,018,422 and the income for the year was \$180,339.

Gifts of a swimming pool, four new tennis courts, and a lectureship in art were received. A system of honor courses leading to the "A.B. with honors" for the best juniors and sophomores was introduced. The library contained 84,000 volumes. President, William F. Pierce, D.D., LL.D.

KIDNAPING. See CRIME.

KINGSFORD-SMITH, Air Commodore Sir Charles Edward. An Australian aviator, lost en route to Singapore in an attempted flight from England to Australia, Nov. 7-8, 1935. Born in Hamilton, Brisbane, Australia, Feb. 9, 1897, he attended the Sydney, N.S.W., Technical High School. At the outbreak of the World War he enlisted in the Signal Engineers of the Australian Imperial Force, and served in Egypt and Gallipoli. Subsequently he was transferred to the Royal Flying Corps, and during an engagement was wounded and later awarded the Military Cross. In 1918 he was assigned as an instructor in the Royal Air Force and retired with the rank of captain to devote himself to commercial flying (1919). He was one of the original six pilots of the West Australian Airways, and in 1926 became a partner in and a pilot of the Interstate Flying Service at Sydney.

For almost 10 years he occupied himself with his commercial work, and it was not until 1927 that

he was brought into the public eye with his record flight around the Australian continent, with Charles T. P. Ulm—7539 miles in 10 days. In the following year he piloted his plane, the *Southern Cross*, a Fokker monoplane with three Wright Whirlwind engines, on a transpacific flight from Oakland, Calif. to Brisbane, Australia. He left on May 31 and arrived at Brisbane on June 9, his flying time for the trip being 3 days, 11 hours, and 19 min. The relay from Honolulu to Fiji was the longest overwater flight yet attempted. He was accompanied on the flight by Charles Ulm as copilot, Lieut. Harry W. Lyon as navigator, and James Warner as radio man. The flight was characterized by accurate navigation and constant radio communication, and for this feat he was awarded the Air Force Cross and was made Squadron Leader of the Royal Australian Air Force. In September of 1928 he made the first return flight from Australia to New Zealand.

In 1929, Kingsford-Smith, accompanied by Captain Ulm, H. A. Litchfield, and T. A. McWilliam, set a new world's record for an Australia to England flight, bettering Captain Hinkler's record by more than two days. They left Derby, Australia on June 25 and arrived in London on July 10, their elapsed time being 12 days, 21 hours, and 18 minutes.

From this time forward, Kingsford-Smith was frequently in the news for his long-distance and record-breaking flights. In 1930, with John W. Stannage, J. Patrick Saul, and Evert Van Dyke, he made a successful east to west Atlantic crossing in the rebuilt *Southern Cross*, equipped with three Wright 5-5 engines. They left Port Marnock, Ireland on June 23, and landed at Harbor Grace on June 25. Thus he became the first man to fly around the world by direct routes over the Pacific and Atlantic oceans. The party continued on to New York and thence across the continent, arriving in Oakland, Calif. on July 4. Kingsford-Smith then returned to England, and in October broke the record made by Squadron Leader Hinkler, by flying from England to Australia in a light Avro-Avian Sports machine equipped with a 120 h p. Gipsy engine, the *Southern Cross, Jr.* He left Heston, England on October 9 and arrived at Pt. Darwin, Australia, on October 19, flying 12,000 miles in 9 days, 23 hours. In this year (1930) he was promoted to Wing Commander and then to Air Commodore.

During 1931 Sir Charles abstained from long-distance flying, and in 1932 made an unsuccessful attempt at breaking the record for an Australia to England flight. In 1933 he made a record breaking solo flight from Lympe Airdrome, England (October 4) to Wyndham, N. Australia (October 11) in a Percival Gull monoplane. His flying time was 7 days, 4 hours, and 43 min., 40 hours less than the previous record made by C. W. A. Scott in 1932. In 1934, with Capt. P. G. Taylor, Sir Charles, flying a Lockheed Altair, *Lady Southern Cross*, left Brisbane on October 20, arriving in Oakland, Calif., on November 4, and covering 7318 miles in 52 hours' flying time.

The first plane, the *Southern Cross*, was purchased by the Commonwealth Government of Australia in June, 1935, and in August, Kingsford-Smith redeemed his plane *Lady Southern Cross* at San Pedro, Calif., which had been impounded for debt. He flew it to New York and there shipped it to England where he intended to try to better the record set at the MacRobertson Air Race, 1934. Before leaving America he announced his intention of retiring from long-distance flying and de-

voting his time to administration and research. In September it was announced that the British Pacific Trust was to back him in the establishment of a new Australia-New Zealand air route.

Desirous of bettering the MacRobertson Race time, he, accompanied by Thomas Pethybridge, left London on November 6 on the first leg of his journey. When no word was received from them for 24 hours, they were reported missing on November 8, and on December 6 the report was made official.

As one of the world's leading airmen, Sir Charles carved a niche for himself in the world of aeronautics by his many flights remarkable for their distance and speed. He was the holder of the Gold Medal of Honor of the International Aviation League, and author (in part) of *Southern Cross Trans-Pacific Flight* (1928) and *The Old Bus* (1932).

KIWANIS INTERNATIONAL. An organization of clubs made up of not more than two of the leaders in each business and profession, united for the rendering of civic and social service to the community. The first club was organized in Detroit, Mich., in 1915; by 1917 the organization had spread into Canada. At the close of 1935 the international organization consisted of 1865 clubs, with an approximate membership of 86,000. The objectives for the year 1935-36 were: service to underprivileged children, citizenship, urban-rural relations, vocational guidance, and boys and girls work. Special objectives are: 1. adequate educational facilities, especially those making for character development; 2. simple economical and efficient government; 3. directive education for proper use of the new leisure; 4. support of churches in their spiritual aims. The 1936 convention will be held in Washington, D. C. The officers elected for 1935-36 were: President, Harper Gatton, Madisonville, Ky.; American vice-president, Clinton S. Harley, Seattle, Wash.; Canadian vice-president, Gordon S. Dodington, Toronto; treasurer, H. G. Hatfield, Oklahoma City, Okla.; secretary, Fred. C. W. Parker, Chicago. Headquarters are at 520 North Michigan Ave., Chicago, Ill.

KLAIPEDA. See MEMEL.

KNIGHTS OF COLUMBUS. A society of Roman Catholic men organized under a special charter, granted by the Connecticut General Assembly in 1882, permitting it to do business as a fraternal benefit society and to promote and conduct educational, charitable, religious, and social welfare work. The four principles of the order are charity, unity, fraternity, and patriotism.

The order is composed of a supreme council, the governing body and highest authority; a supreme board of directors, the executive body; 61 State councils; and 2473 subordinate councils. The total membership as of June 30, 1935, was 450,629, which represented an associate membership of 218,384 and an insurance membership of 232,245. In the 53 years of its existence the society has paid out more than \$43,000,000 to the beneficiaries of its members. Death claims paid during the fiscal year amounted to \$2,494,362.87.

At the annual convention held in New York City, Aug. 21-23, 1935, continued protest against the persecution of the Church in Mexico was pledged. Martin H. Carmody of Grand Rapids, Mich., was reelected supreme knight. William J. McGinley of New Haven, Conn., was supreme secretary in 1935, and D. J. Callahan of Washington, D. C., supreme treasurer. The order publishes *Columbia*, a month-

ly magazine. Headquarters of the supreme council are in New Haven, Conn.

KODACHROME. See PHOTOGRAPHY.

KONDOURIOTIS, PAUL. A Greek naval officer and president, died at Athens, Aug. 22, 1935. He was born on the Island of Hydra in April, 1855. As a young man he entered the navy, and first distinguished himself in the War with Turkey in 1897, when he was instrumental in the bottling up of the Turkish fleet in the Gulf of Salonika, and during the Balkan War of 1912-13, he commanded the Greek fleet and forced the Turkish fleet to retire behind the Dardanelles.

His first political appointment of importance was as Minister of Marine in 1915. He cast his lot with Venizelos and Danglis in the following year and sided with the Allies in opposition to King Constantine, who was dealing with the Central Powers. Three of them set up a provisional government at Salonika, a key position, and organized a state militant. The King was expelled by the Allies and in 1917 Venizelos again became Premier, with Kondouriotis serving as Minister of Marine. In 1919 he resigned from the ministry and was created an admiral for life.

In October, 1920, upon the death of King Alexander, who had succeeded his father, Constantine, Kondouriotis was named regent. Venizelos was defeated at the polls in November and Constantine returned to the throne, the Admiral going out of office. On Sept. 27, 1922, the King was forced to abdicate and was succeeded by his son, George II. Republican propaganda was rife in Greece at this time, and on Dec. 16, 1923, a plebiscite was held, the people voting for a republican form of government. Two days later the King and Queen left for Rumania and Kondouriotis was named regent. On Mar. 25, 1924, the Greek Republic was proclaimed and Kondouriotis was named provisional president.

As a coincidence, it may be noted that his grandfather had been president of Greece at the time of the War of Independence, one hundred years before. On Mar. 19, 1926, Kondouriotis resigned because of the dictatorship of General Panglos. On August 22, however, a bloodless coup d'état was effected by General Kondyles, and he was returned to office. He tendered his resignation on Apr. 20, 1927, but was persuaded to reconsider. Again in June, 1929, he offered to resign but was again persuaded to remain in office. However, on Dec. 10, 1929, his health rapidly failing, he resigned and brought to an end his long and strenuous career.

KOREA (CHOSEN). A former empire of eastern Asia, annexed by the Japanese Empire on Aug. 22, 1910, and incorporated as an integral part of Japan by an Imperial Rescript of 1919. Capital, Keijo (Seoul).

Area and Population. With an area of 85,228 square miles, Korea had an estimated population on Jan. 1, 1934, of 20,791,321, including 20,037,273 natives, 523,452 Japanese, and 39,151 foreigners. Births in 1932 numbered 618,277; deaths, 457,518; marriages, 130,550; divorces, 6712. Populations of the chief cities on Jan. 1, 1933, were: Keijo (Seoul), 355,426; Heijo (Pyongyang), 136,927; Fusan, 130,397; Taiku, 101,078; Jinsen (Chemulpo), 63,658.

Education. About 60 per cent of the population is illiterate. In March, 1934, there were 484 elementary schools, with 91,521 pupils; 2216 common schools, with 636,958 pupils; 11 middle schools, with 6550 pupils; 70 higher common schools and high schools, with 29,451 pupils; and

various technical, normal, and vocational schools. The Imperial University of Keijo had 621 students. Korean students studying in Japan proper numbered 4087.

Production. Korea is a predominantly agricultural country, with rice as the staple product, followed by barley, Italian millet, soy beans, wheat, and red beans. The value of the chief products in 1934 (in 1000 yen) was: Rice, 415,546; barley, 55,290; soy beans, 44,558; foxtail millets, 41,629; cotton, 25,718; wheat, 18,763. Straw manufactures in 1933 were valued at 34,286,118 yen; cattle products, 21,231,326 yen; mineral products (chiefly gold, silver, zinc, copper, lead, iron, tungsten ore, graphite, coal), 48,301,468 yen; marine products, 51,378,000 yen. The chief native industrial products are textiles, paper, pottery, metal ware, manufactured tobacco, brewed drinks, and leather. Factories for spinning silk, milling, and the manufacture of wood pulp, cement, matches, iron, and fertilizer have been established.

Foreign Trade. Korea's trade is largely with Japan. Imports from Japan proper in 1934 totaled 439,622,621 yen (339,817,196 in 1933) and exports to Japan were 407,693,582 yen (315,854,449 in 1933). Imports from foreign countries in 1934 were 79,527,309 yen (64,368,264 in 1933) and exports to foreign countries were 57,673,853 yen (52,773,273 in 1933). The bulk of the latter trade was with Manchoukuo (imports from Manchoukuo in 1934, 46,681,998 yen; exports, 48,358,325 yen).

Finance. The budget estimates of the Korean Government for the fiscal year ended Mar. 31, 1936, balanced at 290,267,414 yen (1934-35 estimates: Receipts, 278,284,452; expenditures, 274,634,642). In 1933-34, actual receipts were 252,073,261 yen; expenditures, 229,224,139 yen. The public debt on Mar. 31, 1935, stood at 498,830,524 yen.

Communications. On Mar. 31, 1935, there were 1908 miles of state and 774 miles of private railway lines open to traffic, and 204 miles of government line were under construction. Highways extended 13,430 miles; they were mainly graded earth and gravel. An airline linked the chief cities with Japan proper and with Manchuria.

Government. Korea is governed as an integral part of Japan through a governor-general with extensive powers. Governor-General in 1935, Gen. Kazunari Ugaki.

KU KLUX KLAN, KNIGHTS OF THE. An American benevolent, eleemosynary, and fraternal institution, incorporated under the laws of the State of Georgia in 1915. "The membership is made up of white, Gentile persons, native-born American citizens, 16 years of age. They must be of sound mind, good character, commendable reputation, and respectable vocation; must believe in the tenets of Christian religion; and must owe no allegiance to any foreign government, nation, institution, sect, ruler, prince, potentate, people or person, their allegiance, loyalty, and devotion to the government of the United States of America in all things being unquestionable." At the biennial legislative meeting held in August, 1934, Dr. Hiram Wesley Evans was reelected president, or Imperial Wizard, this being his fourth consecutive term. H. C. Spratt was secretary; and Sam H. Venable, treasurer. National headquarters are in Atlanta, Ga.

KUWAIT. See under ARABIA.

KWANGCHOW. See FRENCH INDO-CHINA.

KWANTUNG, kwán'dóong'. The territory at the southern extremity of the Liaotung Peninsula,

Manchuria, leased from China by Japan. Area, including adjacent islands, 1337 square miles; population, excluding the armed forces, 1,051,358 (Jan. 1, 1935) of whom 898,117 were Chinese and 152,200 were Japanese. Chief towns (with Sept. 1, 1934 estimated populations): Dairen, the capital, 444,688; Port Arthur (Ryojun), 141,291; Pulantien, 166,809; Chinchou, 125,701.

Production, etc. Maize, groundnuts, pulse, kaoling, and vegetables were the chief agricultural products. The salt output for 1934 amounted to 277,049 short tons. In 1934, imports totaled ¥470,919,748; exports, ¥333,872,147; Japan supplied ¥333,946,547 of the imports and received ¥128,773,133 of the exports (yen averaged \$0.2871 for 1935, and \$0.2972 for 1934). Budget estimates were balanced at ¥23,079,542 for 1934-35, and at ¥24,828,187 for 1935-36. Governor, Gen. Jiro Minami. See JAPAN and MANCHOUKUO under *History*.

LABOR. In the general field of labor in the United States in 1935, the most significant happening was the action of the Supreme Court declaring the National Recovery Administration codes unconstitutional (see Senate Document No. 65, 74th Congress, First Session). This decision, which was rendered as of the calendar day May 27, 1935, splits the year into two unequal parts. When the decision was handed down, organized labor immediately indicated that it would fight to retain the gains made under the codes, even to the point of planning and carrying into execution great strikes. It was the conviction of the leaders that only through aggressive labor action could the gains made be sustained and extended. While in the first days of confusion following the action of the Supreme Court, many employers indicated that they would continue to observe the regulations under their code, it was not long before labor, employer, and Government sources reported widespread breakdown in code standards. The breakdown naturally took place in those industries suffering most from internal disorganization as, for example, cotton textiles.

The losses labor contended it was sustaining were in the fields of wages, hours, and union recognition. There was a widespread feeling that those industries which had accepted, with whatever reluctance, the provision of the NIRA known as Section 7a, were now about to return to the *status quo ante*. It also became immediately apparent that hours were to be increased in almost every industry where competition was rife, and that the short-hour schedules would be retained only in those industries where they had been characteristic before the institution of the NRA. The wage situation was the subject of special discussion by President William Green of the A. F. of L. in August when he attacked a statement made by the Department of Commerce to the effect that "labor is receiving a larger portion of total income to-day than it did in 1929." (See STATISTICS.) It was Mr. Green's allegation that the section of the National Income report entitled "Labor Income" included many high salaried individuals acting in directive and managerial capacities. He stated:

When figures are shown separately for wage earners, we realize that they have lost more heavily than any other group. Their income had declined by 1932 to 40.8 per cent of what it was in 1929 and, even with the effort to raise wages for the minimum groups under the NRA they are still receiving scarcely more than one-half their 1929 income (52 per cent). While these wage earners in 1934 received only 52 per cent of their 1929 income, property owners received 61.4 per cent, men in business for themselves received 65.2 per cent of their 1929 income.

Section 7a of the NIRA was seemingly designed to encourage the organization of workers in industry into unions. In April, 1935, the Twentieth Century Fund released a study which indicated that the total trade union membership in the United States was 4,200,000 and that an additional 2,500,000 employees were organized in so-called company unions. The vast extension of company unionism was one of the significant events of this period. The study referred to pointed out, however, that company unions were not adequate agencies for genuine collective bargaining. However, their existence became a matter of considerable agitation to employers in the fields of steel, rubber, and automobiles, as the workers made moves to turn the company organizations to their own ends. Employers in these lines began to fear that they had created a "Frankenstein" but the total significance of this type of labor organization has not yet appeared, though it is significant that its dangers were first perceived in those industries not under the control of A. F. of L. unions, and in which the development of so-called industrial unions is advocated by leaders like John L. Lewis.

Several significant special studies of labor conditions appeared during the year. These studies indicate the existence of an excess labor supply which promises to be the basis of permanent relief population on the one hand and a reserve which employers may find themselves able to tap in times of difficulty, on the other. Three examples of such studies may be profitably cited here: those of automobiles, coal and cotton textiles. The study of the automobile industry was made by the National Recovery Administration and was released on Feb. 28, 1935. The Recovery Administration's principal findings concerning labor conditions in the automobile industry were as follows:

- 1 Labor unrest exists to a degree higher than warranted by the depression
- 2 The foreman's power and the gap between the workers and the executive are important causes of labor unrest
- 3 Espionage systems exist.
- 4 Irregularity of employment has increased in recent years
- 5 Depression competition has spurred the speed-up beyond economic capability to produce day by day.
- 6 Automobile workers are considered old at 40
- 7 Hourly earnings are high, annual incomes are low.
8. Relatively few employees obtain supplementary earnings from other sources during lay-offs.
- 9 The privilege of averaging hours on an annual basis is neither necessary nor desirable.

With regard to cotton textiles, the following passages from the report of the Cabinet Committee on the conditions and problems of the cotton textile industry relate specifically to labor:

There has been a considerable decline in the number of wage earners in the cotton textile industry during the past eight years. From an annual average of about 468,000 workers in 1927 there was a decline to about 330,000 in 1931 and an increase to about 380,000 in 1933. The average employment from January to June, 1935 was 408,000 . . . New England bore the burden of the decline from about 195,000 workers in 1923 to 90,000 in 1933. Some years the South increased from 220,000 to 257,000. . . .

Employment records of individual mills which closed in the decade of the 1920's show that employment tends to fall from year to year, resulting in a gradual rather than a sudden displacement of labor. Under certain conditions, the bankruptcy route may cause less serious dislocation than a control process of readjustment such as would follow the proposed liquidation of possibly 5,000,000 excess spindles within a period of a few years. Nevertheless, the total process of liquidation has given rise to stranded populations of such magnitude that the problem can no longer be met through

individual efforts of the displaced workers. Gradual as the decline of employment may have been in some of the textile manufacturing centres, the displaced workers have not been absorbed in other industries, and further displacement at this time would almost certainly lead to an enlargement of the stranded populations.

The bituminous coal industry was the subject of a report made by the Federal Emergency Relief Administration under the title *The Bituminous Coal Industry with Survey of Competing Fuels*. With regard to labor the significant remarks in this report read:

On the basis of the rate of increase in mechanization during the period 1927 to 1931, and assuming a maximum production of 500,000,000 tons when business conditions are similar to 1929, it is estimated that mechanization and loss in demand for bituminous coal will displace 75,000 to 137,000 men. At that time employment is estimated to be between 428,000 and 490,000 men. The lower limit presupposes no change in productivity between the eight and seven hour day, whereas the upper limit prepostulates the mechanism decrease in productivity.

The conclusions cited are intended to give an indication of the nature of the problems faced by workers in the specific industries mentioned, and by extension to indicate the nature of the labor problem at large in the coming decade. The studies were made with the idea of illuminating both of these points.

Reports from foreign countries during 1935 almost uniformly indicate that labor lost ground in the field of wages. A study made by the National Industrial Conference Board and released during the year indicated that between 1929 and 1934 wage rates fell 26 per cent in Poland, 21 per cent in Germany, and 18 per cent in Italy. On the other hand in countries in which conditions were less unsettled, labor experienced lesser declines as, for example, declines of but 2 per cent in Sweden and 3 per cent in Switzerland. Wage declines were also reported in Austria. From the other side of the world, from China, there also came reports of declining wage levels, and while no information is available as to conditions in Japan on this point, it is well-known that relief construction projects were initiated to care for the unemployed and the impoverished farmers. To offset the general pessimism which could be derived from this picture, it may be said that there have been marked increases in many countries in the number of persons employed, and several agencies for economic studies lately predicted imminent world recovery.

LABOR, AMERICAN FEDERATION OF. The fifty-fifth annual convention of the American Federation of Labor was in session at Atlantic City, N. J., Oct. 7-19, 1935. It was characterized by President Green as the "most historic" convention in the Federation's history; while the description of it by William P. Mangold, writing in the *New Republic* for October 30, sums up the evaluation of outside observers: "the stormiest and perhaps most momentous convention in its [the Federation's] history." When the convention opened it was apparent that four highly controversial issues were bound to be raised: (a) the question of forming a labor party; (b) the matter of craft unions vs. industrial unions; (c) the internal war in the building trades; and (d) the matter of demanding a constitutional amendment removing from the Supreme Court power to declare economic and social welfare legislation unconstitutional. As it turned out, the second of these prospective issues was most vigorously debated and the conclusion arrived at in

the convention was not, it is clear, one which brought the disputation to an end.

Division in the Leadership. There were 16 resolutions in favor of a labor party, introduced into the convention, as contrasted with 3 the preceding year. In his opening address President Green indicated the line of the ruling group in the Federation. He said: "It [the A. F. of L.] will not take that action because some order comes from some gathering in a foreign country directing the workers of the nation to form an independent labor party. No government in a foreign land, no camouflaged organization meeting on foreign soil can tell the American Federation of Labor what to do." This, of course, was a thrust at the Third International which previously had called on all labor sympathizers to support independent political action by labor, and it not only epitomized the official attitude on the question immediately at issue, but the attitude toward the Communists as a general issue.

The labor party proposal was defeated, but it is immensely significant that no amount of "red-baiting" on the part of the official group could quiet the push from the liberals in the Federation ranks. They persisted in their course of challenging the authority of the old guard on crucial issues and in turning what was intended to be a routine convention into a battle ground of diametrically opposed approaches to the fundamental problems of unionism and labor action. Prominent in the ranks of the liberals were such leaders as John L. Lewis of the United Mine Workers, the reputed leader of the group, Sidney Hillman of the Amalgamated Clothing Workers, Francis Gorman of the United Textile Workers, David Dubinsky of the Ladies' Garment Workers, Charles P. Howard of the Typographical Union, Harvey C. Freming of the Mine, Mill, and Smelter Workers, and many of the younger delegates from recently organized unions in mass production industries.

The Anti-Red Position of the Executive Council. The convention began, and for several days continued, on an even tenor with the Executive Council leadership seemingly in control. The anti-red attitude of President Green and his close associates was underlined by an exchange of compliments with the American Legion and a promise of cooperative action in combating the red menace. It was not until the beginning of the second week of the sessions that John L. Lewis clearly indicated the line he intended to take by suddenly introducing a resolution reading: "RESOLVED: That no officer of the A. F. of L. shall act as an officer of the National Civic Federation or be a member thereof."

This resolution created a storm, for it was obviously an attack on Vice Pres. Matthew Woll, acting president of the Civic Federation, a creation of the late Mark Hanna, notoriously anti-red, and reputedly anti-labor. After a brief period of jockeying the Lewis resolution was sent to the relevant committee, and Woll anticipated the probable action by resigning from the Civic Federation, in which course he was followed by all other labor leaders holding membership. That all was not well had been indicated earlier when President Green's recommendation that J. W. Williams be recognized in preference to his rival, M. J. McDonough, and seated as the delegate representing the building trades department, thus making him the officially accepted leader of this important group of trade unions, was defeated. The proposal was rejected by a vote of 18,092½ to 10,062. The whole controversy was eventually handled by referring it to a com-

mittee of six, representing both groups and if this committee is unable to agree, each group will suggest candidates of a seventh member to George M. Harrison, who arranged the proposed method of conciliation. Until this committee has finished its work, neither group will be given official recognition by the Executive Council of the Federation.

But while the opposition was able to gain these minor victories, it was not able to achieve an unbroken success. After its power had been clearly emphasized, however, the so-called anti-red resolution was considerably diluted by the Executive Committee. Originally designed rigidly to exclude Communists from membership in the Federation, it was finally passed in a form which excludes them from seats in State labor Federations and central labor bodies, if they are known Communists. The more drastic version was defeated on the ground that it was an undue interference with the affairs of affiliated national unions on the part of the parent body; and it was held that the national unions were the exclusive judges of their own memberships. Of the other controversial issues raised by the liberals, the proposal for a labor party was, as remarked, defeated, and the suggestion for a constitutional amendment to restrict the powers of the Supreme Court in the matter of social legislation was tabled.

Attack on Fascism. That there is a good deal of confusion in the minds of the leaders is apparent when the action of the convention with regard to the two Fascist countries is considered in the light of their anti-communism. A strong resolution was passed condemning the Italian adventure in Ethiopia, reading in part as follows:

Labor is always the major sufferer in every war, this being true of victor and vanquished alike. The civilized nations since the World War have used their utmost efforts to prevent the adjustment of any international dispute by the arbitrament of war. . . . Italy because of her present acts of aggression against Ethiopia has been justly convicted as being an outlaw nation . . . which all civilized countries should refuse to assist commercially, financially, or in any other manner.

The convention also denounced the Hitler government of Germany for stamping out the German trade union movement in "blood and fire," reaffirmed the boycott of German goods and services first voted two years previously, advocated the continued support of the Labor Chest for Relief and Liberation of Workers in Europe (of which William Green is president, Matthew Woll, chairman, and David Dubinsky, treasurer), and urged that "all American sport organizations be prevailed upon not to participate in the 1936 Olympic Games in Berlin."

The Routine Resolutions. More of a routine nature were the resolutions on questions of national policy. Racketeering was condemned. A Federal investigation of strike breaking and private detective agencies was asked. Revival of NRA work-codes was demanded, the feeling being that the losses sustained since their abandonment were more serious than the deficiencies of the codes. The Southern tenant farmers were applauded for their efforts at organization to resist the oppression of the landlords. The Liberty League lawyers were attacked for their extended declaration against the Wagner Labor Disputes Act. Aid in the struggle to accomplish the ratification of the Child Labor Amendment was promised. The Lundeen social security bill was rejected as Communist-inspired. The 30-hour week was once more endorsed.

Craft versus Industrial Unionism. But the struggle over the craft vs. industrial unions issue,

which came to a head on October 15, really dominated the convention and promised to be the outstanding issue of 1936 in trade union circles. The precipitating cause was the effort to get the minority report on the industrial unionism issue adopted. Six of the 15 members of the committee on resolutions had endorsed this report which declared in part that "the time has arrived when common sense demands the organization policies of the American Federation of Labor must be molded to meet present-day needs," especially in "the great mass-production industries and those in which the workers are composite mechanics, specialized and engaged upon classes of work which do not truly qualify them for craft-union membership."

Such a programme was to provide "for the organization of workers in mass-production and other industries upon industrial and plant lines, regardless of claims based upon the question of jurisdiction," and the executive council was "expressly directed and instructed to issue unrestricted charters to organizations formed in accordance with the policy. . . ." On the other hand, the majority report recalled the decision of the 1934 convention which had "provided that the workers classified as 'mass production employees' should be granted charters in the mass-production industries which would include all of the mass-production workers employed in such industries," and demanded that the 1935 convention reinstate this principle. In this connection it is important to know that in the "Report of the Executive Council" to the 1935 convention the following remarks are to be found:

A survey made of the strength of organizations established in the cement, aluminum, gas, coke and by-products, and radio convinced the Executive Council that the time had not yet arrived when international unions could be established in these named industries with any reasonable hope that they would prove to be well-founded and self-sustaining. It is the opinion of the Executive Council that the time has not yet arrived for the establishment of organizations in these industries. The Executive Council, however, has taken preliminary steps to the organization in these industries.

Over against this position, the contention of the industrial unionists may be placed, the summary being that of Julius Hochman, vice president of the International Ladies Garment Workers' Union: ". . . since 1933 of the million workers who have entered the Federation in the last two years, 65 per cent have joined this type of union, 22 per cent have joined craft unions, and 13 per cent have entered local and Federal unions. Further analysis of membership figures shows that the 33 industrial unions have, during the same period, increased their own membership by 75 per cent, that 76 craft unions have increased theirs by 13 per cent, and that the Federal unions have gained 146 per cent." When this issue was brought on the floor of the convention, it precipitated what was described as "one of the bitterest debates in the history of the Federation."

The advocate of the minority report was John L. Lewis. Mr. Lewis pointed specifically to the need of organizing the workers in steel, automobiles, cement, rubber, and other mass production industries, especially in view of the fact that but 3,500,000 of the 39,000,000 wage earners of the country were now in the Federation. He was supported by the liberal elements in the convention and specifically by Charles P. Howard of the Typographical Union and Thomas McMahon of the United Textile Workers. The craft union forces were led by Matthew Woll of the Photo-engravers Union, John P. Frey of the Metal Trades Department, and Arthur Wharton of the International

Association of Machinists. These craft unionists argued chiefly for the acceptance of the 1934 position and for faith in the good intentions of the executive council in accomplishing the end in which both sides were interested. When the vote was taken, it was found that the minority report had been rejected by the convention, 18,025 to 10,924.

The Plan to Organize on Industrial Lines. This did not end the matter, however, for Mr. Lewis made it clear that he did not consider it possible to settle so important an issue once and for all on the floor of the convention. The vote was more in the nature of a preliminary test of strength than a decision. This was made clear when, on Nov. 9, 1935, it was announced that seven internationals had formed a special organization to push industrial unions. The internationals were the United Mine Workers, the Typographical Union, the Amalgamated Clothing Workers, the International Ladies' Garment Workers Union, United Textile Workers, Oil Field, Gas Well, and Refinery Workers, United Hatters, Cap and Millinery Workers International Union, and the International Union of Mill and Smelter Workers. The membership of the committee selected to direct the work was as follows: John L. Lewis, president, John Brophy of the Mine Workers, director, Charles P. Howard of the Typographical Union, secretary, Sidney Hillman of the Clothing Workers, David Dubinsky of the Ladies' Garment Workers, Thomas E. McMahon of the Textile Workers, Harvey C. Freming of the Oil Workers, M. Zaritsky of the Cap and Millinery Workers, and Thomas H. Brown of the Mine, Mill, and Smelter Workers. The organization styled itself the "Committee for Industrial Organization." The statement of purposes follows:

It is the purpose of the committee to encourage and promote organization of the workers in the mass production and unorganized industries of the nation and affiliation with the American Federation of Labor. . . . Its functions will be educational and advisory and the committee and its representatives will cooperate for the recognition and acceptance of modern collective bargaining in such industries. Other organizations interested in advancing organization work along the lines of industrial unionism will be invited to participate in the activities of the committee. . . .

The struggle was carried a step further when, on November 23, John L. Lewis resigned as vice-president of the A. F. of L. in a one-sentence letter to President Green. It was understood when the resignation was submitted that Mr. Lewis might have a free hand in his campaign for the principle he supports and for the defeat of his opponents in the Executive Council. The step was immediately countered by a warning from President Green that the campaign might "create a line of cleavage" in the Federation that would have "grave consequences." He therefore pleaded for the general acceptance of the verdict of the convention. Mr. Lewis replied that Mr. Green's warning would not influence him to drop his campaign. Early in December literature in favor of industrial unionism was sent out to every labor organization in the country. Mr. Lewis announced that his move was designed to bring into being a powerful and comprehensive labor movement which could resist those forces in the nation "that would wipe out, if they could, the labor movement in America, just as it was wiped out in Germany or just as it was wiped out in Italy."

The Report of the Executive Council. The prospect for 1936 was, therefore, for a rough and tumble fight for control of the organizational policy of the A. F. of L. It is interesting, in the light of this, to review the points selected for emphasis

in the "Report of the Executive Council" to the 1935 convention. This document began with the statement that "The past year has been one of momentous consequence to the labor movement of this country. The enactment of Federal substantive law recognizing Labor's right to organize in unions so as to have the machinery for collective bargaining, with the consequent obligation devolving upon employers to respect this right and do their part in putting it into effect, was an event of great importance." The reference was, of course, to the Wagner Labor Relations Bill.

Elaborating the point, the Report stated, "Under the National Labor Relations Act, we have every reason to believe that new goals in the field of labor relations will be achieved. The one outstanding question in connection with this legislation is to what extent will the National Labor Relations Board be permitted to protect the right to organize and bargain collectively under the commerce clause of the Constitution."

The final verdict of the A. F. of L. on the NRA codes, a revival of which was demanded in the convention, was as follows: "In general it may be stated that Labor had no voice in the determination of code provisions, in code administration, or in adjustments in code provisions as they were found necessary. United action of Labor and management was the exception not the rule. . . . It cannot be denied that the NRA resulted in certain economic and social benefits. Minimum standards were adopted as a base upon which to build a better economic structure. Child labor was virtually eliminated. Unfair trade practices which had been eating into the very core of our industry and trade were brought under some degree of control. The way was cleared for progress. On the other hand, it must be recognized that those steps which were taken did not go far enough and that there were certain major insufficiencies which must be remedied in our next programme for national economic control. These may be summarized as follows. (1) Insufficient formulation of policy and adherence thereto; (2) Insufficient labor participation in code making, code administration and code reformation; (3) Insufficient statistics on which to base the entire programme; (4) Insufficient powers of enforcement."

The following laws were selected from the great number passed as being of particular benefit to labor: Labor Disputes Act (Wagner National Labor Relations); Security Act; Law to stabilize the coal industry (Guffey Bill); Air Mail Act providing rates of compensation and working conditions for all pilots; Forty-hour week for 121,069 postal employees with no reduction in wages; Railroad Retirement Act (later declared unconstitutional); The four billion dollar relief bill; Repeal of the last 5 per cent cut in Federal salaries; The appropriation for the repatriation of the Filipinos in U.S.; The prison labor law prohibiting the transportation of prison-made products into States having State use systems.

Membership. The total membership of the American Federation of Labor in the month of August, 1935, as reported to the convention by Secretary Morrison, was 3,153,913. This is an increase of 545,902 over the membership reported for the same month in 1934. The average paid membership for the 12 months ended Aug. 31, 1935, was 3,045,347 in 109 national and international unions and 1354 directly affiliated local trade and Federal labor unions. In the preceding year, as reported to the 1934 convention, there were 2,608,011 members

in 109 national and international unions and 1788 directly affiliated local organizations. Thus the gain in average paid-up membership in the past year was 437,336. Part of the decrease in the number of directly affiliated groups was due to the transfer to the United Brotherhood of Carpenters and Joiners of all directly affiliated local unions in logging and timber operation and sawmills. The disbanding or suspension of 620 local trade and Federal labor unions in direct affiliation with the American Federation of Labor during the year 1934-35 was offset in part by the organization of 272 new groups of this type chartered during the year.

Although the number of affiliated national and international unions reported to the convention was the same in 1935 as in 1934, a change in make-up took place during the year. The Friendly Society of Engravers and Sketchmakers, a small group of skilled craftsmen making designs and plates for the textile and wall-paper industries and others using similar processes, which had affiliated with the American Federation of Labor in 1933 after years of independent activity, withdrew its affiliation in 1935. During 1935 the International Union of United Automobile Workers was chartered as an affiliate. After the close of the fiscal year covered by the executive council's report (Aug. 31, 1935), another international charter of affiliation was issued, in this instance to the United Rubber Workers. While these charters were not issued in time for the organizations of automobile workers and rubber workers to participate in the 1935 convention as internationals, their admission raised to 110 the number of national and international unions affiliated with the American Federation of Labor. At the meeting of the executive council held immediately upon the adjournment of the convention, decision was reached to charter as a national union in the near future the organized sleeping-car porters, now formed into directly affiliated local unions.

Make-up of the Executive Council. The executive council for the year 1935-36 thus constituted was: President, William Green, United Mine Workers; first vice president, Frank Duffy, United Brotherhood of Carpenters and Joiners; second vice president, T. A. Rickert, United Garment Workers; third vice president, Matthew Woll, International Photoengravers' Union; fourth vice president, John Coefield, United Association of Plumbers and Steamfitters; fifth vice president, Arthur Wharton, International Association of Machinists; sixth vice president, Joseph N. Weber, American Federation of Musicians; seventh vice president, G. M. Bugnizet, International Brotherhood of Electrical Workers; eighth vice president, George M. Harrison, Brotherhood of Railway Clerks; ninth vice president, Daniel J. Tobin, Brotherhood of Teamsters, Chauffeurs, Stablemen, and Helpers; tenth vice president, William L. Hutcheson, United Brotherhood of Carpenters and Joiners; eleventh vice president, John L. Lewis, United Mine Workers; twelfth vice president, David Dubinsky, International Ladies' Garment Workers Union; thirteenth vice president, Harry C. Bates, Bricklayers, Masons, and Plasterers' International Union; fourteenth vice president, Edward J. Gainer, National Association of Letter Carriers; fifteenth vice president, W. D. Mahon, Amalgamated Association of Street and Electric Railway Employees; secretary-treasurer, Frank Morrison, International Typographical Union. With the exception of the president and the secretary-treasurer, who are not officers of their respective unions, the members of the executive council

of the American Federation of Labor are also elected officials of their respective organizations, all except Frank Duffy and Matthew Woll being international presidents.

LABOR ARBITRATION. Among the confusions incident to the declaration by the Supreme Court that the National Recovery Act was unconstitutional, none was more serious than that in the field of government control of labor disputes. In recent years three boards have acted in this field, the National Labor Board, appointed in August, 1933, with Sen. Robert Wagner as chairman; its successor, the National Labor Relations Board, appointed on July 9, 1934, pursuant to authority contained in a joint congressional resolution, which was affected by the Schechter decision; and its successor of the same name, appointed in August, 1935, under a new act of Congress popularly known as the Wagner Act.

The First Labor Relations Board. The first National Labor Relations Board had two chairmen during its lifetime, Lloyd K. Garrison, dean of the Law School of the University of Wisconsin, who resigned, and Francis Biddle of Philadelphia, who also resigned to allow the reconstitution of the Board under the new act. The Board was active until June 16, 1935, and prepared and published two volumes of its decisions, vol. i covering the period from July 9, 1934, to December, 1934, and vol. ii from Dec. 1, 1934, to June 16, 1935 (U.S. Government Printing Office, 1935). These volumes report a total of 386 cases covering all aspects of the field of labor disputes and give the decisions of the Board in full, thus constituting one of the most interesting body of formal labor law material in existence. A cursory examination of the decisions reveals that the recurring difficulties dealt with were: (a) contention over the right of labor to bargain collectively; (b) the question of company unions; (c) charges of discrimination in firing, usually with the alleged purpose of defeating an attempt at unionization; (d) "interference, restraint, and coercion," usually on the part of the employer; (e) the question of majority rule in determining what employee-group should be recognized for purposes of collective bargaining; and (f) the determination of the meaning of the phrase, "representatives of their own choosing" with regard to employees.

Outstanding Cases. In the course of dealing with these and other difficulties, the Board rendered numerous decisions of a routine character, many of them essentially reiterations of decisions made in similar cases earlier, but others, for one reason or another, were dramatized in the press and assumed the proportions of national issues. Among the latter, the following were perhaps the most spectacular: the Donovan case, the Houde Engineering Corporation case, the Colt's Patent Fire Arms Manufacturing case and the Jennings case. The first named was undoubtedly the most extraordinary, for it involved a dispute between an employee and a government organization, the National Recovery Administration. The Board's decision (No. 39) begins and ends as follows:

On June 18, 1934, effective June 30, 1934, John L. Donovan, who had been serving as President of the NRA union affiliated with the American Federation of Government Employees, was discharged by General Johnson from his position as technical advisor to the Labor Advisory Board. This discharge precipitated a controversy in which the Government maintained that Donovan had been discharged for inefficiency and other sufficient reasons, while Donovan and the union asserted that he had been discharged for union activity. After a considerable history . . . General Johnson, the union, and Mr. Donovan submitted the case to this Board for arbitration, and agreed to abide by its ruling. . . . The Board . . . rules that John L. Donovan

should be immediately reinstated to his former position on the staff of the Labor Advisory Board.

This case caused more than ordinary stir because it involved the government itself in a labor dispute circling around the vexed question of discrimination against union leaders; because it was, prior to being submitted to the Board, the occasion for the mass picketing of NRA headquarters, and fairly constant heckling of General Johnson; and because it afforded the spectacle of the dramatic General Johnson suffering defeat at the hands of a governmental agency operating under powers derived from the National Recovery Act of which he was one of the architects!

The Houde case (No. 68) gained its importance from the fact, as phrased in the decision, that the Houde Corporation "declined to recognize the Union as the collective bargaining agency for all the employees eligible to vote in the election. The company insisted that under Section 7(a) of the Recovery Act it was obligated to bargain collectively not merely with the Union but also with the organization voted for by the minority of employees." It is obvious that this carried the Board to the heart of several of the problems which were to be most vexing to it. The decision rendered, therefore, was a matter of considerable interest to both employers and employees. It was handed down on Aug. 30, 1934, and read in part as follows:

. . . when a person, committee, or organization has been designated by the majority of the employees in a plant or other appropriate unit for collective bargaining, it is the right of the representative so designated to be treated by the employer as the exclusive bargaining agency of all employees in the unit, and the employer's duty to make every reasonable effort, when requested, to arrive with this representative at a collective agreement covering terms of employment of all such employees.

The Colt case (No. 248) held especial interest because it concerned a company engaged in the manufacture of munitions and therefore was a subject of investigation by the Senate Munitions Committee at or about the time the case was being tried. The matter at issue was the effort of the company to avoid dealing with the regular unions by attempting to form a company union with which to bargain. The efforts of the regular unions to obtain recognition continued for over a year without a strike being called. The Board held that the Colt Company had clearly violated Section 7(a).

The Jennings case (No. 195) was one of the most persistently debated cases in the history of the Board. It originally involved the discriminatory discharge of Dean S. Jennings, an editorial worker on the San Francisco *Call-Bulletin*, who had arranged with his employer that his vacation coincide with a convention of the Newspaper Guild that he might attend the convention as a delegate, and who was later notified that the arrangement was canceled, whereupon, on his registering objections, he was compelled to resign. The case as argued involved the question of the jurisdiction of the Board, which was decided in the affirmative. On Dec. 3, 1934, the Board held that Jennings had suffered discriminatory discharge and ordered him reinstated. The case was reopened on Dec. 7, 1934, at the request of Mr. Blackwell Smith, acting at the request of Mr. Donald R. Richberg, head of the National Recovery Administration. The purpose was to question the jurisdiction of the Board, it being alleged that the case more properly belonged to the authorities administering the Newspaper Code. The Board denied this interpretation and reaffirmed its original decision, on Dec. 12, 1934. But Mr. Jennings was never reinstated. In fact, speaking at the hearings on the Wagner Bill, Chairman

Biddle asserted that action in accordance with decisions was obtained in but 34 out of 86 disputed cases. While 33 cases were referred to the Department of Justice, no action was taken on them.

Other Labor Boards. Other boards handling labor disputes cases during the year were the so-called Textile Labor Board, the Automobile Labor Board, and the Petroleum Labor Board. All went out of existence when the NRA was declared unconstitutional except as they were continued for one reason or another by executive order of the President. Few of these boards have as yet rendered reports of their activities during the first six months of 1935, but some idea of the extent of them can be gained by reference to material of earlier date. From Sept. 26, 1934, to the end of the year, the Textile Labor Board received 1600 cases involving 579 mills, all complaints about failure to rehire following the great textile strike of 1934 in the settlement of which the employers agreed not to practice discrimination. The Automobile Labor Board, from Mar. 29, 1934, to Feb. 5, 1935, received a total of 2035 cases of which 1061 were settled informally, over 500 were withdrawn, and 199 were carried to a decision by the date specified. These cases chiefly involved questions of discrimination, improper discharge, and misapplication of seniority rules. Up to the adverse decision on the Schechter case, the Petroleum Labor Board chiefly handled cases alleging violations of the wages and hours provisions of the Petroleum Code, discrimination, and disputes over the choice of representatives for collective bargaining. The relative volume of these cases can be seen from the fact that 3945 cases fell in the first category, 77 in the second, and 64 in the third.

The Second Labor Relations Board. The second effort to establish a National Labor Relations Board was made in August, 1935, under an act passed on July 5. The Board members appointed were Joseph Warren Madden, chairman, professor of law in the University of Pittsburgh, John M. Carmody, former member of the National Mediation Board for the railway industry and later associated with the FERA as labor adviser, and Edwin S. Smith, a member of the original Board of this name. The new setup differed, in one major respect, from the previous one in that the new law contained thoroughgoing enforcement provisions. Its most significant tasks may be summarized as follows: (1) it was to guarantee to labor its right to join organizations and bargain collectively; (2) it was to protect labor against discriminatory hiring and firing which has as its object the interference with labor organizations; and (3) it prohibited the formation of employer-controlled company unions if they are used as a means of circumventing the act and the formation of regular employee unions.

In reviewing the new act (*Survey Graphic*, December, 1935) Lloyd K. Garrison, a chairman of the first board of this name, pointed out that these three points were not new but received judicial sanction in the famous case of *Texas and New Orleans Ry. Co. v. Brotherhood of Ry. and Steamship Clerks* decided by the Supreme Court in 1930. But a fourth point covered is the most debated of all: that which provides that the employer must negotiate with the bargaining representative selected by the majority of the employees. As pointed out above, this was a matter with which the previous board had great difficulties. However, it is important that the principle has been accepted by earlier governmental boards handling labor disputes such

as the National War Labor Board, the Railroad Labor Board, the National Labor Board, the original National Labor Relations Board, and the Petroleum, Steel, and Textile Boards. Nevertheless, the decisions rendered on this point will be crucial to the success of the new Board. In connection with point (3) above, it is significant to note that late in December the National Industrial Conference Board reported that employee representation plans were spreading rapidly, especially in iron and steel, automobiles, rubber, and petroleum refining, or precisely where trade union representation is weakest.

The Constitutionality of the Act. Unfortunately, the constitutionality of the Board was immediately called into question, first by the Subcommittee on Industrial Relations and Labor Legislation of the National Lawyers Committee of the American Liberty League in a report issued on Sept. 5, 1935, and generally taken to reflect the opinion of the more recalcitrant employers of the nation, and, second, and most importantly by District Judge Merrill E. Otis of Kansas City on Dec. 21, 1935, ruling on the so-called Majestic Flour Mills case involving the right of the employees to organize without employer interference. Judge Otis argued that the act was unconstitutional because "Manufacturing is not commerce nor any part of commerce. . . . Congress, therefore, under the commerce power, cannot regulate manufacturing. Hence it cannot regulate the relations between employers and employees in manufacturing as commerce." On December 24 the Board announced that it would appeal the decision to the Circuit Court of Appeals and point out that a decision of the latter may be reviewed by the Supreme Court of the United States.

The Work of the Department of Labor. Under the new National Labor Relations Board conciliation and arbitration plays no part, work of this character being chiefly centred at present in the hands of the conciliation service of the Department of Labor. During the first nine months of 1934, this service reported that it had handled 944 disputes involving 469,265 employees. It is expected that the volume of work will grow now that the boards operating under the codes have ceased to exist. A second permanent organization existing apart from the NLRB, and dealing with labor disputes, is National Mediation Board handling labor relations on the railroads, and consisting of William Leiserson, chairman, James W. Carmalt and Otto M. Beyer. The board reported that in 1935 all disputes had been settled amicably. It also pointed out that there were 3021 contracts between the carriers and the different crafts and groups of employees, 73 per cent of which were with national labor unions, and 77 per cent of which were in force on the Class I railroads which employ 90 per cent of all railroad workers.

LABOR LEGISLATION. The year 1935 was a landmark in the history of labor legislation. Besides the far-reaching programme adopted by Congress, every one of the 44 States holding regular legislative sessions enacted at least some new legislation for the protection of the safety, health, or security of labor. In addition, more than a dozen States—including three of the four not holding regular sessions this year—had special sessions, thus adding to the number of labor laws adopted.

By far the most important new labor law of the year is the Social Security Act adopted by Congress. Besides setting up a Federal contributory

system of old age benefits, this Act provides Federal encouragement and aid to the States for unemployment compensation, old age assistance, mother's pensions, pensions for the blind, maternal and child health, child welfare, public health, and vocational rehabilitation. Other new Federal labor laws of leading significance are the National Labor Relations Act, the new Railroad Retirement Act, and the Bituminous Coal Conservation Act. Congress also adopted unemployment compensation and old age pension laws covering the District of Columbia.

In the States, chief significance attached to the adoption of unemployment compensation laws by nine States—Alabama, California, Massachusetts, New Hampshire, New York, North Carolina, Oregon, Utah, and Washington—and new old age pension laws in 11—Alabama, Arkansas, Connecticut, Florida, Illinois, Mississippi, Missouri, Oklahoma, Rhode Island, Texas, and Vermont. At the end of 1935 there were 10 States having unemployment compensation laws (Wisconsin enacted such a law in 1932) and 39 with old age pension laws. Kentucky, Oklahoma, and Texas submitted to referendum constitutional amendments authorizing old age pension legislation, and they were adopted. Closely related as social insurance measures were the new accident compensation laws adopted by Florida and South Carolina, leaving only two States—Arkansas and Mississippi—without this modern social legislation. An accident compensation measure designed to cover workers engaged in interstate transportation, the largest single group still unprotected, was introduced in Congress by Senator Robert F. Wagner as prepared by the American Association for Labor Legislation in cooperation with compensation administrators and representatives of the groups directly affected. Twenty-five additional States gave formal legislative acceptance to the terms of the Wagner-Peyser Act for cooperation in the nationwide system of public employment offices, leaving only seven States—Kansas, Maine, Maryland, Michigan, Mississippi, Montana, and South Carolina—without such laws. Four more States ratified the Child Labor Amendment to the Federal Constitution, making a total of 24 State ratifications and leaving only 12 more needed to make this Amendment part of the Constitution.

Amendments to accident compensation laws were made in about 30 States. Several of these changes are especially noteworthy. New York, after some years of experience with limited-list coverage, extended its law so as to cover all occupational diseases; North Carolina made compensable a list of 25 diseases, including silicosis; and West Virginia made special limited provision to compensate workers who contract silicosis. Growing interest in the occupational disease problem was also shown by the creation of special investigating commissions in four States—California, Maryland, Michigan, and New Hampshire. Another significant development in accident compensation was the growing demand for exclusive State insurance funds. Such a bill received the strong support of Governor Lehman in New York. Partly to meet the serious problem of insolvency, which recently has been one of the chief causes of complaints against insurance by private carriers, four States—Minnesota, New York, New Jersey, and North Carolina—adopted schemes for assuring payment of benefits by means of special funds raised by assessment upon the carriers. The cost of administering accident compensation was as-

sessed upon insurance carriers in the new laws of Florida and South Carolina and by amendment in Idaho and Nebraska. Injured employees were given the right to select their physicians from panels of doctors chosen by county medical societies and the industrial commissioner under a New York amendment which also included other important changes affecting medical treatment and care.

Although in the leading industrial States detailed safety and health regulations are now issued as administrative rules under general statutory authorizations, a dozen State legislatures adopted statutory safety and health laws. Maine and North Carolina created boards of boiler rules empowered to adopt and enforce regulations for the prevention of boiler explosions. North Carolina authorized general safety rule-making by the division of standards and inspection. Illinois created a mining investigating commission to recommend changes in the State mine safety laws, and Indiana appointed a commission to study the accident problem in the smaller coal mines. North Dakota provided for the licensing of coal mines to provide funds for the enforcement of mine safety regulations. Oregon strengthened its electrical code.

The prevention of fee-charging employment agency abuses was the purpose of a law requiring State licensing and regulation enacted in Maryland. Illinois also revised and reenacted its State licensing law and Colorado adopted special regulations covering theatrical employment agencies. In New York, one of the few States with local licensing of employment agencies, a bill for State regulation was defeated by only a narrow margin. Operators of company stores and labor camps, however, were required to obtain permits from the Industrial Commissioner.

Interest aroused by the movement for the Federal Child Labor Amendment was in part responsible for several important advances in State laws regulating the employment of minors. Connecticut and Pennsylvania raised the age of employment to 16, and New York and Texas provided that minors must attend school until 16. In Wisconsin, minors, if unemployed, must under a new law attend school until 18.

Laws further limiting the hours of employment of women and minors were adopted in a dozen States. These included Connecticut, where the weekly maximum was reduced from 55 to 48 hours and the daily maximum from 10 to 9 for both women and minors; New York, where the hours limit for male minors was reduced from 54 to 48 a week and from 9 to 8 a day, and certain overtime provisions were eliminated from the women's 48-hour law; and Massachusetts, where the existing 48-hour law for women was extended in coverage. Delaware repealed all laws prohibiting the employment of women at any time of the day or night where such laws hinder operations of any establishment where continuous processes are necessary; and Massachusetts extended until April, 1936, the power of the Commissioner of Labor and Industries to permit the employment of women in textile mills until 10 p.m.

In several States hours laws affecting men as well as women were adopted. Illinois for the first time adopted a one-day-of-rest-in-seven law; and Massachusetts extended its existing law on this subject to cover firemen and watchmen. Idaho and Montana strengthened their laws regulating hours in mines and dangerous employments. Congress enacted a 40-hour week law giving postal

service employees a five-day week. The increasingly serious problem of excessive hours of duty required of some commercial motor vehicle drivers resulted in regulatory legislation in five more States, making a total of 17 which have such laws in addition to the score of States which deal with this subject by administrative regulations.

Despite the introduction of minimum wage proposals in several State legislatures and passage through one house in Michigan and Pennsylvania, the only legislation enacted on this subject was in Illinois where the expiration date in the 1933 act was removed to make the law permanent; in Massachusetts where decrees issued under the "voluntary" act of 1912 were brought under the new mandatory act of 1934; and in New Hampshire which, following Massachusetts' action in 1934, ratified the interstate compact on minimum wages. About 15 States, however, adopted laws on the subject of wage collection and wage payment. Thus the labor department's power to aid workers to collect unpaid wages was strengthened in California, Michigan, and Washington; and the Massachusetts and New York weekly wage-payment laws were extended to cover all except agricultural and private domestic employments. Several States enacted laws providing for payment of the prevailing wage rate on public works.

Important improvements were made by Connecticut and New York in the regulation of industrial homework. Certificates must now be obtained from the State labor department by all Connecticut homeworkers and provision is made for control of the giving out of such work. In New York, the existing law was extended to cover all homes in the State where homework is carried on and employers who wish to give out homework were required to secure permits from the Industrial Commissioner who may refuse them in the event that such work is found to jeopardize either standards of employment in factories or the homeworker's welfare.

Laws restricting the issuance of injunctions in labor disputes were enacted in four States—Maryland, Massachusetts, New York, and North Dakota; and in Connecticut a board of mediation and arbitration was created in the labor department. Commissions on interstate compacts were created in Connecticut, New Jersey, New York, and Vermont. Two States—Alabama and Rhode Island—enacted laws creating new State departments of labor; and Florida and South Carolina created State industrial commissions to administer their new workmen's compensation laws. Commissions were created in Alabama, California, Massachusetts, Washington, and the District of Columbia to administer unemployment compensation laws. In New Hampshire, New York, Oregon, and Utah this duty was assigned to existing labor departments. Amendments directly affecting labor law administration were enacted in several other States.

LABOR LEGISLATION, AMERICAN ASSOCIATION FOR. Founded in 1906, this membership organization of socially-minded economists, lawyers, journalists, labor leaders, and employers has worked along scientific lines, consistently attacking needless industrial evils from the general welfare viewpoint. It continues its work as the American arm of the International Association for Social Progress formed by the fusion of the three international organizations for labor legislation, unemployment, and social insurance. Progress of the Association was recorded in its substantial quar-

terly, the *American Labor Legislation Review*. A cumulative index to the first 20 volumes of this *Review* was published in 1931.

The Association from the beginning has given special attention to social insurance legislation, and to laws for the prevention of industrial accidents and occupational diseases, the mitigation of the evil effects of unemployment through long-range planning of public works, the regulation of fee-charging employment agencies and the development of public employment offices, and for the provision of one day of rest in seven. It places special stress upon effective administration of the laws.

In 1935 the Association's quarterly *Review* completed its 25th annual volume, an event celebrated in the December issue by publication of comments from numerous "old subscribers."

The Association's 29th annual meeting was held in New York City, December 27-30, several sessions being held jointly with the American Sociological Society, the American Statistical Association, and the American Farm Economic Association.

The president in 1935 was Joseph P. Chamberlain; the secretary, John B. Andrews, and both were re-elected. Headquarters is at 131 East 23rd Street, New York City. See **LABOR LEGISLATION**.

LABOR RELATIONS BOARD. See **LABOR ARBITRATION**.

LABOR TROUBLE. See **TRADE UNIONS**.

LABRADOR. A dependency of Newfoundland, forming the most easterly part of the North American continent. Area, 118,400 sq. miles; population (Jan. 1, 1934), 4411 compared with 4324 (1931 census). Capital, Battle Harbour. See **NEWFOUNDLAND**.

LABUAN. See **STRAITS SETTLEMENTS**.

LACHAISE, là'shāz', GASTON. An American sculptor, died in New York City, Oct. 18, 1935. Born in Paris, France, Mar. 19, 1882, he attended the Barnard Palissy School of Industrial and Applied Arts and later l'École Nationale des Beaux Arts. In 1906 he came to the United States and for a time was a sculptor's assistant in Boston, later becoming associated with Paulanship. During this association he worked on many important projects, and did the carving on the Manship Memorial to J. Pierpont Morgan, now in the Metropolitan Museum of Art. In 1916 he became a naturalized American citizen and opened his own studio.

He first exhibited at the Bourgeois Gallery, New York in 1918 and again in 1920. It was here that the critics discovered him and predicted his establishment as one of the foremost sculptors in the country. He exhibited also at the Intimate Gallery of Alfred Stieglitz, 1927, at the Brummer Gallery in 1928, and at the Museum of Modern Art in 1935. His work is represented in many American museums, including the Cleveland Museum of Art, the Newark Museum, the Pennsylvania Museum, Philadelphia, the Morgan Memorial Museum, Hartford, Conn., the Phillips Memorial Gallery, Washington, the Smith College Art Museum, as well as in many private collections, notably those of Adolph Lewi-sohn, Alfred Stieglitz, A. E. Gallatin, and Mrs. John D. Rockefeller, jr.

Although not to be considered the outstanding American sculptor, there was no doubt that he made significant contributions to American sculpture. His series of monumental female figures were his best known works. Critics differed as to the quality of these, some considering them sublime, others gross. His heroic figures were said to fol-

low the tradition of fine art and were compared to those of Michaelangelo. His delicate figurines of dolphins, sea gulls, and peacocks, and his interesting portrait busts, which combined character analysis and surface verisimilitude to an extraordinary degree, were perhaps better known to the general public.

Among his well known works were a decorative frieze in the American Telephone and Telegraph Building, New York; the bronze sea gull on the pyramid of granite of the National Coast Guard Memorial in Arlington Cemetery, and four sculptural panels representing "Understanding, the Spirit of Progress"; "The Conquest of Space"; "Gifts of Earth to Mankind," and "Invention Seizing the Light of the Sun," for the R.C.A. Building in Rockefeller Center, New York. Not long before his death he was commissioned to do a group symbolizing the amalgamation of the races in America to be placed in Fairmont Park, Philadelphia. He had completed only the first small model when taken ill.

LACROSSE. Canada regained the Lally Trophy and international lacrosse supremacy in 1935, defeating a United States fifteen in three successive games in Western Canada in the summer. The series, in which the Americans lost, 15-7, 14-9, 14-9, was played under box lacrosse rules which call for play indoors on a wooden floor, where the distance between goals is 60 yards as compared to the 90 yards in the outdoor game played in the United States. The United States players experienced difficulty in performing well in the cramped quarters but were tremendously successful after the Lally Trophy matches in a series of exhibitions through Western Canada.

Although no champion is named by the ruling body and the game is played almost exclusively in the East, the Mount Washington Club of Baltimore must be given top honors for the campaign. The clubmen, who in 1934 shared laurels with Johns Hopkins, were undefeated in 1935, and Johns Hopkins was beaten by St. John's of Annapolis, 10 to 9. St. John's later fell before Mount Washington, which also downed Yale and Harvard. Princeton was one of the finest college teams, unbeaten in seven games, with Army and Stevens also strong.

In an effort to foster the game which had been dropped as a demonstration sport at the 1936 Olympics, the United States Intercollegiate Association made plans to send a team to Vancouver in 1936 for the Golden Jubilee series there. Another squad will go to England and a combined Oxford-Cambridge team will play in the United States.

LAFAYETTE COLLEGE. An institution for the higher education of men in Easton, Pa., founded in 1826. The registration in the autumn of 1935 was 834. The faculty numbered 94. The productive funds amounted to \$3,835,000 in 1935, and the income for the previous year was \$140,760. The number of volumes in the library was 90,000. President, William Mather Lewis, A.M., LL.D., Litt.D.

LANDS, PUBLIC. According to the annual report of the Commissioner of the U.S. General Land Office for the fiscal period ended June 30, 1935, the vacant, unreserved, and unappropriated public lands in the United States are not now subject to disposition under the nonmineral public land laws, having been temporarily withdrawn from settlement, location, sale, or entry, and reserved for classification. The lands in the States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South

Dakota, Utah, and Wyoming were withdrawn by Executive order of Nov. 26, 1934, pending determination of the most useful purpose to which such lands may be put in consideration of the provisions of the Taylor Grazing Act of June 28, 1934, and for conservation and development of natural resources, and the lands in the States of Alabama, Arkansas, Florida, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Oklahoma, Washington, and Wisconsin were withdrawn by Executive order of Feb. 5, 1935, pending determination of the most useful purpose to which said lands may be put in furtherance of the land programme. Executive order of May 20, 1935, amended the order of Nov. 26, 1934, so as to permit the completion of exchanges authorized by section 8 of the Taylor Grazing Act.

The area of the unappropriated and unreserved public lands as of June 30, 1934, was approximately 165,695,497 acres, not including Alaska. The area of the unappropriated and unreserved public lands in Alaska was approximately 346,174,242 acres.

Because of the withdrawals made by the Executive orders there were no unreserved public lands at the close of business on June 30, 1935. The areas which were included in entries, selections, filings, etc., during the fiscal year were 1,752,010 acres in the public-land States and 7068 acres in Alaska, a total of 1,759,078 acres. However, the net area of the public land was not decreased to that extent as considerable areas were restored to the public domain through the rejection of applications and the cancelation of entries.

There also remained subject to lease or disposal 38,915,684.62 acres of patented lands in which the Government had reserved some or all of the mineral deposits.

The total cash receipts from sales, leases, and other disposals of public lands (including receipts from copies of records, sales of Government property, etc.) were \$4,700,135.47, and from sales of Indian lands \$100,026.77, an aggregate of \$4,800,162.24, all of which was deposited in the Treasury; whereas the total expenditure from operations was \$1,142,393, as hereinafter shown, making a net return of \$3,657,769.24.

Receipts from bonuses, royalties, and rentals under laws providing for the leasing of mineral rights on the public domain (including royalties and rentals from potash deposits and royalties on coal leases in Alaska) aggregated \$4,004,054.54, of which \$3,924,652.44 was received under the act of Feb. 25, 1920 (41 Stat. 437). The largest receipts under this act were from lands in California, the amount being \$1,984,603.95. Wyoming was second, with receipts amounting to \$1,391,220.92. Under the provision of the mineral leasing act cited, each State receives 37½ per cent of the receipts thereunder from the public lands within its borders, the reclamation fund receives 52½ per cent, and the other 10 per cent remains in the Treasury of the United States as miscellaneous receipts.

Division of Grazing. The director of the Division of Grazing, F. R. Carpenter, in his first annual report to the Secretary of the Interior for the fiscal year ending June 30, 1935, stated that the act of June 28, 1934 (48 Stat. 1269), commonly known as the "Taylor Grazing Act," is a new development in the national policy for conservation of natural resources in accord with the traditions of the Department of the Interior.

The U.S. Director of Grazing was authorized, with the concurrence of the agencies concerned and the approval of the Secretary, to select such as-

sistants as were required for the administration of the Taylor Grazing Act from the staffs of the Geological Survey, the General Land Office, and the Division of Investigations. At the close of the year a total personnel of 35 people were thus assigned to the Division—21 from the Geological Survey, 8 from the Division of Investigations, and 6 from the General Land Office.

The primary task in the administration of the public domain under the Act contemplates establishment of grazing districts where the area of public land is adequate to warrant such action for (1) conservation of natural resources, and (2) stabilization of the livestock industry dependent upon the range. Over a long period of years grazing use in excess of carrying capacity has caused a progressive deterioration of that land through displacement of the more palatable forage plants by species of low palatability or of no worth for grazing. In this transition natural erosion processes have been accelerated, causing loss of soil fertility, and in places even actual removal of soil cover, thus rendering the land incapable of producing a density of any vegetative growth equivalent to natural conditions. This deterioration has been in progress over a period of 35 to 40 years.

Following a series of State-wide hearings the committees elected at such hearings considered the range problems of their respective States and recommended the establishment of 50 districts involving an aggregate area of approximately 142,000,000 acres of vacant, unreserved, unappropriated public land. The action of these committees was taken without reference to the provision in the existing law limiting the creation of such districts to 80,000,000 acres of vacant, unappropriated, unreserved public land. Accordingly, in the absence of further authority from the Congress, only 32 of the districts proposed could be established. The districts selected for establishment included areas in which range administration was most urgently needed and the lands were conveniently located for administration.

Division of Grazing, Circular no. 1, entitled *Rules Providing for Special Elections for District Advisors to Assist in the Management of Grazing Districts*, was approved by the Secretary, Apr. 23, 1935. Circular no. 2, entitled *Rules for the Guidance of District Advisors in Recommending the Issuance of Grazing Licenses*, was approved by the Secretary, May 31, 1935. These circulars contain the general regulations issued during the year for the administration of grazing districts.

In the preparation of these regulations an effort has been made to take immediate steps for range regulation in a manner that would permit needed readjustments to be made gradually and on the basis of thorough investigations. Furthermore, some time must be allowed to permit all interested persons to file applications for grazing permits and for the examination and rating of such applications under the terms of the Taylor Act.

LAOS. See FRENCH INDO-CHINA.

LATIN AMERICA. See articles on the various countries of the Caribbean, Central America, and South America; also PAN AMERICAN UNION.

LATTER-DAY SAINTS, CHURCH OF JESUS CHRIST OF. A religious body, commonly known as the Mormon Church, organized in 1830 at Fayette, N. Y., by Joseph Smith. Its membership is largely in the Mountain States, owing to the early migration of Mormons and their final settlement in Utah. For history see THE NEW INTERNATIONAL ENCYCLOPEDIA under MORMONS.

In 1935 the organization of this church included 115 stakes, 971 wards, and 80 independent branches, with a membership of 579,118. Each stake organization is a pattern of the general Church organization, with a stake presidency of three men and a high council of 12 men. Each stake comprises several wards. A bishop and two counselors preside over the ward. A branch presidency of three men presides over a branch. There were 13 missions in America with 416 branches and a membership of 110,271; the missions in Europe had 318 branches and a membership of 31,169, and those in the Pacific Islands with 158 branches and a membership of 17,297. Of the 1383 missionaries, 475 were at work outside the United States. The administrative affairs of the church and the performance of all church ordinances are attended to by the priesthood, consisting of the Melchizedek Priesthood, a senior order, with 90,028 male members and the Aaronic Priesthood, a junior order, with 92,771 male members.

Practically all wards have suitable buildings for worship, class instruction, and recreation. Stake conferences are held quarterly for church business and worship. Ward conferences are held annually.

The church maintains seven temples which are devoted to sacred ordinances for the living and the dead, such as baptism, endowments, and marriages. It also maintains Brigham Young University (q.v.), Latter-day Saints Business College, 5 collegiate institutes, 1 high school, 88 senior seminaries (schools adjoining high schools and providing special religious instructions), and 262 junior seminaries (schools for the religious training of junior high school students). Enrollment in senior seminaries, 16,759; in junior seminaries, 13,956.

The auxiliary bodies include a women's relief society, numbering, in 1935, 70,515 members, who care for the sick and poor. The Sunday schools in 1935 had an enrollment of 302,817 pupils and 29,539 officers and teachers. The two mutual improvement associations, composed of young people, had an enrollment of 129,530. The primary association for those under 12 had 115,945 members.

The church holds in Salt Lake City, Utah, two general conferences each year, one during the first week in April and the other the first week in October, at which the work of the general authorities is reviewed. In 1935 these authorities were: First Presidency: Heber J. Grant, president; J. Reuben Clark, Jr., first counselor; David O. McKay, second counselor. Quorum of the Twelve Apostles: Rudger Clawson, president, and Reed Smoot, George Albert Smith, George F. Richards, Joseph Fielding Smith, Stephen L. Richards, Richard R. Lyman, Melvin J. Ballard, John A. Widtsoe, Joseph F. Merrill, Charles A. Callis, and Alonzo A. Hinckley, apostles. First Council of Seventy: J. Golden Kimball, Rulon S. Wells, Levi Edgar Young, Antoine R. Ivins, Samuel O. Bennion, John H. Taylor, and Rufus K. Hardy. Presiding Bishopric: Sylvester Q. Cannon, presiding bishop; David A. Smith, first counselor; and John Wells, second counselor.

LATTER-DAY SAINTS, REORGANIZED CHURCH OF JESUS CHRIST OF. After the death of Joseph Smith in 1844, several factions developed among the Latter-day Saints. In 1852, in Wisconsin, one of these scattered congregations effected a partial reorganization, which was completed in 1860 under the name of "Reorganized Church of Jesus Christ of Latter-day Saints."

In 1935 the church reported a membership of 114,300, which included members throughout the United States and in Canada, Great Britain, Aus-

tralia, Germany, Isle of Pines, the Netherlands, Switzerland, Norway, Sweden, Palestine, South Sea Islands, Hawaii, and New Zealand. There were 745 churches, 7000 ministers, and 730 Sunday schools with 50,000 pupils. The church maintains Graceland College at Lamoni, Iowa, and homes for the aged and the Independence Sanitarium at Independence, Mo. The official periodical, the *Saints' Herald*, is issued weekly.

Dr. Frederick M. Smith has been a member of the First Presidency since 1902 and president since 1915. Frederick A. Smith has been Presiding Patriarch since 1913 and L. F. P. Curry Presiding Bishop since 1932. Headquarters are at the Auditorium, Independence, Mo.

LATVIA. A Baltic republic, established Nov. 18, 1918. Capital, Riga.

Area and Population. Latvia has an area of 25,402 square miles and a population estimated in 1934 at 1,939,350 (1,900,045 at the 1930 census). About 35 per cent of the population was concentrated in urban communities of 2000 or more. Populations of the chief cities in 1930 were: Riga, 377,917 (1934 estimate, 379,044); Liepāja (Libau), 57,238; Daugavpils (Dvinsk), 43,226; Jelgava (Mitau), 33,048. The division of the 1930 population by nationality was: Letts, 73.42 per cent; Russians, 12.52; Jews, 3.68; Germans, 3.12; Poles, 1.36 per cent. By religious affiliation the division was: Protestants, 56.58 per cent; Roman Catholics, 23.69 per cent; Greek Catholics and Orthodox, 8.93 per cent.

Education. About 13.6 per cent of the population over 10 years of age was illiterate in 1930. The school attendance in 1933-34 was: Elementary, 219,551; secondary, 20,167; University of Latvia at Riga, 8585

Production. A total of 4,813,000 acres, or 30 per cent of the area, was under cultivation in 1930; 4,246,000 acres were meadow and pasture; and 4,100,000 acres were woods and forests. Production of the chief crops in 1934, with 1933 figures in parentheses, was (in 1000 units): Wheat, 8051 bu. (6725); rye, 16,210 bu. (13,979); barley, 10,002 bu. (8955); oats, 26,770 bu. (22,783); potatoes, 53,123 bu. (51,534); linseed, 597 bu. (485); flax, 35,671 lb. (27,337). The 1934 livestock statistics were: horses, 375,200; cattle, 1,147,600; sheep, 1,208,900; swine, 686,400. State and private forests in 1932-33 produced 5,959,000 cu. meters of timber. Industrial enterprises on Jan. 1, 1934, numbered 3788 and the number of employees was 59,853. The chief industrial lines were metallurgy, chemicals, textiles, mineral working, woodworking, and foodstuffs.

Foreign Trade. Imports for consumption in 1934 were valued at 94,888,000 lats (91,368,000 lats in 1933) and exports of Latvian products at 85,431,000 lats (81,504,000 lats in 1933). The leading imports were (in 1000 gold dollars): Metal manufactures, 1971; machinery, 1778; coal and coke, 1477; raw cotton, 999; wool yarn, 891; cotton fabrics, 766; other textiles, 796. Leading exports were (in 1000 gold dollars): wood (including pulpwood, mine timbers, and boards), 5881; butter, 2789; wood manufactures, 1850; flax, 909; clover seed, 836. Germany in 1934 supplied 24.5 per cent of the imports; United Kingdom, 22.6 per cent; United States, 7.1 per cent. Of the exports the United Kingdom purchased 37.8 per cent; Germany, 29.3 per cent; United States, 2.9 per cent.

Finance. For the fiscal year ended Mar. 31, 1936, budget estimates placed receipts of all kinds at 150,990,207 lats and expenditures at 150,975,099 lats. For 1934-35 budget estimates balanced at

142,162,832 lats, but preliminary returns indicated a deficit of 2,500,000 lats. In 1933-34 actual revenues were 129,500,000 lats and expenditures 137,300,000 lats. The public debt on Apr. 1, 1934, amounted to 84,650,000 lats (internal, 11,170,000; external, 73,480,000), compared with 105,478,000 lats on Apr. 1, 1933. The lat's par value previous to Jan. 31, 1934, was \$0.193; after that date, \$0.3267.

Communications. In 1934 there were 1836 miles of railway line, 770 miles of surfaced highways, and 2775 miles of navigable waterways. In 1933 the railways carried 12,327,000 passengers and 2,806,884 tons of freight while the waterways handled 968,087 tons. The net tonnage of vessels entering the ports with overseas cargoes in 1934 was 705,000 (677,000 in 1933).

Government. The Constitution of Feb. 15, 1922, vested executive power in a president, elected by Parliament for three years, and legislative power in the Saeima (Parliament) of 100 members, elected by direct popular suffrage for three years. On May 15, 1934, the government headed by Premier Karlis Ulmanis established a *de facto* dictatorship pending reform of the Constitution. Parliament was dissolved, its functions were assumed by the Ulmanis Cabinet, and the activities of the political parties were banned. President in 1935, Albert Kviesis.

History. The Fascist dictatorship established May 16, 1934, by Premier Karlis Ulmanis and his Minister of War, Gen. J. Balodis, continued in power during 1935 without a serious challenge to its rule from either the Leftist groups or the pro-Nazi element among the German minority. Parliament remained dissolved, political parties were banned, and those newspapers which were not suppressed were closely censored. Politically the government aimed at the elimination of all minority cultures and the development of a purely Lettish national state. It continued during 1935 its deflationary economic policy, based upon retention of the gold standard, maintenance of a balanced foreign trade through import restrictions and stimulation of exports, and the protection of agriculture by government subsidies and tariffs. Establishment of the Latvian Credit Bank to further these policies was approved by the cabinet Apr. 9, 1935.

As a member of the Baltic Entente (q.v.), Latvia participated in the conferences of the Foreign Ministers of the Baltic states held at Kaunas on May 6-8 and at Riga on December 10-11. See ESTONIA under *History* for the results of these conferences. Like the other Baltic states, Latvia during 1935 appeared to be wavering with regard to the alliances it should seek in the event of a war involving Germany and the Soviet Union. Besides the development of its relations with Estonia and Lithuania, Latvia explored the possibility of military coöperation with Sweden and Finland. Toward the end of 1935 the action of the dictatorship in lifting the ban on Hitler's autobiography, *Mein Kampf*, and the conclusion of a Latvian trade treaty with the Reich were regarded as indications of rapprochement with Germany. The related questions of defense and foreign policy were carefully considered at a conference of all Latvian representatives in European capitals and officials of the Foreign Office held in Riga during July.

LAW. The article LAW is divided into three parts: ADMINISTRATION, CONSTITUTIONAL AND PUBLIC LAW, and PRIVATE LAW. For developments in allied fields, see CRIME, INTERNATIONAL LAW,

REFERENDUM, MARRIAGE AND DIVORCE, LABOR ARBITRATION AND CONCILIATION, LABOR LEGISLATION, MEDICAL JURISPRUDENCE, ETC.

ADMINISTRATION

Courts. The British House of Lords, for the first time in a generation, sat on December 12, with Lord Chancellor Hailsham presiding as a Court for the trial of a member—young Lord de Clifford—on the charge of manslaughter, arising from an automobile collision. He had claimed the ancient privilege, guaranteed by *Magna Carta*, of "trial by his peers." After the prosecution's case was presented, the defense counsel submitted that there was nothing to answer, the peers retired for deliberation and upon their return, each rose, as his name was called, and announced "Not guilty, upon my honor."

The ancient office of Coroner has recently come under severe criticism in England for subjecting apparently innocent persons to grueling inquests, without the safeguards which attend the ordinary trial, such, e.g. as the exclusion of hearsay. Lord Chief Justice Hewart, *ex officio* Chief Coroner of all England, has pointed out, however, that the office retains considerable other jurisdiction beyond holding inquests.

The U.S. Supreme Court opened its October term on the 7th of that month, sitting for the first time in its new building. Despite the expenditure of nearly \$10,000,000 thereon, the court room capacity is but a little over 300, which was practically reached at that session, when admissions to the bar numbered 114. The docket included about 500 cases, among which were several which vitally affected the "New Deal," as they involved the constitutionality of some of its leading measures. The chief ones affected adversely by the court's decisions were the Railway Retirement Act (May 6) and the National Industrial Recovery Act (May 27). See *Public and Constitutional Law*. The Court's work for the preceding term, beginning October, 1934, is exhaustively treated in an article by Professors Frankfurter and Hart (*Harvard Law Rev.*, XLIX, 68), which presents numerous tables showing its character and quantity.

The Federal judicial conference, created by the act of 1922, met in Washington on October 3, all of the Federal circuits, except the 10th, being represented by the respective circuit judges. The Attorney General's report showed 123,758 cases pending in the Federal district courts—a decrease appearing in private suits only. Provision for additional judgeships was recommended and reference of cases to masters in chancery discouraged.

The New York City Domestic Relations Court, which includes a children's and a family division, completed the first two years of its existence in October, the number of its judges having been increased from 7 to 9. The report of Presiding Justice, John Warren Hill, showed 98,162 hearings in the preceding year. Although the city's Negro population is but one-twentieth of the whole, it furnished one-sixth of the children arraigned. Of the 4897 children investigated, all but 178 were native born, though only one-fourth of the parents were. In "promoting" Deputy Police Commissioner Sweeney, on the force since 1903, to the city magistrates bench and naming as chief city magistrate, Jacob Gould Schurman, son of the former Cornell University president, Mayor La Guardia announced a policy and set a precedent which may well be studied by those who tackle the puzzling problem of judicial selection.

Movements are reported from 11 States to supplant the elective system and to remove the judiciary from politics; but the alternatives heretofore proposed are far from satisfactory. One of them is choice by the legislature, a demonstration of which was afforded in Rhode Island at the beginning of the year. At the opening of the session, a party floor leader's resolution, declaring vacant all Supreme Court posts, was adopted by the Senate, and later in the day, after the Lieutenant Governor of the same party had refused to seat two Senators of the opposite party, whose election had been certified by the State returning board, the legislature proceeded to elect an entire new group of justices and over 30 cases which had been submitted to the court were required to be reargued. The whole affair has been severely criticized. (*A.B.A. Journ.* XXI, 306) The Philippine legislature also passed an act "reorganizing" the judiciary, and, according to dispatches from Manila, legislated out of office the five remaining American Supreme Court justices.

All of this renders very timely an article on "The Career of Judges and Prosecutors in Continental Countries," *Yale Law Journ.*, XLIV, 268, by Morris Ploscowe of the New York Bar (Soc. Sc. Research Council Fellow, 1931-32), which describes the system prevailing in Germany, France, and Italy (it actually exists in most other continental countries) whereby university graduates in law are admitted to the examinations for the state's legal career service. If successful in passing, they may be appointed first to a minor post and later, as vacancies occur and their service is satisfactory, are advanced to a higher one; but are removable or transferable for cause only and by a special tribunal. The author deplores the small salaries and the favoritism sometimes displayed in promotions; but finds it

almost impossible to escape the conclusion that the European method of examination and apprenticeship is more successful in drafting competent and honest inferior court judges than the American method of leaving the choice of magistrates to politicians.

In line with this is a movement to reform the Ontario primary courts (described in the *A.B.A. Journ.*, XXI, 91) which has already resulted in reducing the number of magistrates from 151 to 62 and the justices of the peace from about 6000 to 300, with non-political appointment, tenure, and inspection.

The Soviet government, on April 8, owing to the increase of serious crimes among juveniles, issued a decree for the trial of all minors over 12, by the regular criminal courts and under ordinary law; repealing the criminal code provisions for the trial of those under 14 by a special board of the Education Commissariat, which, however, during the previous year, allowed 1200 cases of juvenile delinquency to go unheard.

On April 2, the unification of the German judiciary through the absorption of the former state courts by the Reich judicial system, was formally inaugurated in Berlin, according to the formula, *ein Reich, ein recht*. The scheme has trebled the number of Reich judges, all of whom are now appointed and removable by the chancellor. A decision of the highest Prussian administrative court holds that acts of the secret police are not subject to judicial review.

On June 1, President Mendieta signed a decree "reorganizing" the Cuban judiciary because, as a result of the two years' revolution, incompetent judges had been appointed, displacing others who

had served long and faithfully. It does not appear, however, that the latter were reinstated; for while 25 judges were removed by the decree, 31 new ones were appointed, 41 transferred, 6 demoted, and 32 promoted. From another Spanish-American country came loud complaints of cruel delays in the administration of criminal justice. *El Tiempo*, published at Bogota, Colombia, lists 31 prisoners who have been waiting from 15 to 114 months for disposition of their cases, the average being 3 years; but one is reported as waiting 4 years and 8 months, another 4 years and 10 months, and a third 9 years and 6 months.

Personnel. Sir William Mulock, Chief Justice of the Ontario Supreme Court, celebrated his 91st birthday on June 19; Justice Brandeis of the U.S. Supreme Court his 79th on November 13; William A. Johnston (89) completed his 51st year on the Kansas Supreme Court bench. Judge Ben. B. Lindsey (1934 YEAR BOOK, p. 363) of the Los Angeles Superior Court, founder of the Denver Juvenile Court, was reinstated on November 25 (his birthday) as a member of the Colorado bar, by a vote of 6 to 1 of the State Supreme Court justices.

Necrology. Of the judges who died in 1935, easily the most eminent were O. W. Holmes (q.v.), 94 on March 6 and the Marquis of Reading (q.v.), 75 on December 30. The former, in addition to numerous biographies during his lifetime, is the subject of articles in the *Harvard Law Review* (XLVIII, 1277, 1279) by Sir Frederick Pollock and Professor Frankfurter, respectively, and in the *A.B.A. Journ.* (XXI, 211) by W. W. Cook. Other deceased judges include: James Owens, former judge of the Supreme Court in Ireland, 90; James Pennewell, former Chief Justice of the Delaware Supreme Court, 81; Cuthbert W. Pound (q.v.), 70, former Chief Judge of the New York Court of Appeals; William C. Wait, 81, former justice, Massachusetts, Supreme Judicial Court; W. S. Metcalfe, 81, former Chief Justice of the Ohio Court of Appeals; Edward A. Newcomb, 77, Presiding Judge of the Lackawanna (Pa.) County Courts; Dr. Bernard J. C. Loëer (q.v.), 86, of Netherlands, first President of the World Court; Francis N. Thayer, 89, former Chief Justice of the Worcester (Mass.), 2d district court; Louis Fitzhenry, 65, of the U.S. 7th Circuit Court of Appeals; C. A. Nye, 74, brother of the famous American humorist, "Bill" Nye, and for 24 years on the Minnesota District court bench; Joseph H. Gaskill, 84, former New Jersey Common Pleas Judge.

Juries. "The traditional jury has never given satisfaction anywhere," writes Morris Ploscowe in the *Harvard Law Review* (XLVIII, 433) where he learnedly traces "The Development of Present Day Criminal Procedures in Europe and America." In another article on "Jury Reform in Italy" (*Journ. of Crim. Law & Criminology*, XXV, 577) he discusses the same institution from its introduction into that country in 1848 but deals mostly with changes under the Fascist régime. Five "assessors . . . considered on the same plane as professional magistrates" are now substituted for the ten jurors of former times, to pass on law as well as facts. The reform, he says, "took the middle road between . . . retention of the jury and . . . its complete abolition." The mode of selection and operation gives the government too much authority, he thinks, but, "because of the general dissatisfaction with the jury, the Italian reform bears watching." British attachment to the jury is shown in the trial of an Indian subject at Addis Ababa, Ethiopia, by

a jury of five British residents of Aden brought in for that purpose.

In *Norris v. Alabama*, 294 U.S. 587; *Patterson v. Alabama* ib. 600; and *Hollins v. Oklahoma*, 295 U.S. 394, the Supreme Court reversed convictions of Negroes on the ground that jurors of their race had not, for a long time at least, been called for service in the counties where the trials were held. Four days after the Alabama cases were decided, Governor Graves, in a letter to circuit judges and solicitors, interpreted the decision as meaning "that we must put the names of Negroes in jury boxes in every county." In New Orleans, for the first time in 47 years, a Negro sat on a criminal jury on November 15. While the decisions above cited were generally commended by the northern press, it is well to remember that, if we are to retain the jury system, a racial qualification for service thereon can hardly be expected to improve it. To secure jurors of intelligence and character is difficult enough already.

By a pronounced majority (see REFERENDUM), the New York State electorate, on November 5, adopted a constitutional amendment authorizing the legislature to "provide that the verdict of a jury in any civil case may be rendered by five-sixths. . . ." Such is already the law in 5 western States; 12 others allow verdicts in civil cases by three-fourths and one (Montana) by two-thirds. New York thus becomes the 19th State to authorize such verdicts by less than the full number; and such is the rule, even in criminal cases in four States. Nor is this a recent innovation; rather is it a return to the ancient and general practice. Thus "the Roman verdict was by ballot and unanimity was manifestly unnecessary." (Williams, *Justinian*, 332) It "was not enjoined upon the English jury during the early ages. . . . A majority sufficed" (Esmein), as it did in colonial Connecticut (and still does in France) where, in case of a tie, the magistrate decided (in France, the tie constitutes an acquittal). In Hawaii, verdicts by three-fourths were authorized from 1847 to 1898, when a backward step was forced as a result of annexation. A New Hampshire statute of 1859, providing for such verdicts, was declared unconstitutional by the State Supreme Court, but we may look for further progress in that direction. (See Best, *Juridical Soc. Papers*, I, 7; Weinstein, *United States Law Rev.*, LXIX, 513; 1934 YEAR BOOK, p. 361.)

Two Federal prosecutions of the year illustrate the need of such a provision if not something more. The case of *U.S. v. Bob* (a mining promoter charged with mail fraud) had been pending over four years when the third deadlocked jury was discharged after "deliberating" 31 hours. In *U.S. v. Flegenheimer* ("Dutch Schultz"), charged with income tax evasion, after the discharge of a jury (out for nearly 28 hours), a second, out more than that period, brought in a verdict of acquittal, which, the presiding judge told the jurors, before dismissing them, "shakes the confidence of law-abiding people in truth and integrity." The New York legislature, at its recent session, considered an act providing for women jurors and passed one authorizing the selection of alternate jurors to avoid retrial in case of death or disqualification of one of the regular panel.

Our Judicial Senate. (See 1934 YEAR BOOK, p. 362) In *Jurney v. MacCracken*, 294 U.S. 125, the Court upheld the Senate's power, conceding it narrow in scope, to punish failure to produce for a legislative inquiry, papers which, after service of the subpoena, were destroyed. "Where the of-

fending act was of a nature to obstruct the legislative process," observed Justice Brandeis, in a unanimous opinion, replete with citation of historical precedents, "the fact that the obstruction has since been removed or that its removal has become impossible, is without legal significance."

Administrative Tribunals are recognized as at least quasi-judicial in two Supreme Court decisions of 1935. In *Humphrey's Ex'r v. U.S.*, 295 U.S. 602, the attempted removal of Federal Trade Commissioner Humphrey was held invalid on the ground (1) "that the intent of the (organic) act is to limit the executive power of removal to the causes enumerated, the existence of none of which is claimed here" and (2) that such limitation is valid except as "to purely executive officers" (as in *Myers v. U.S.*, 272 U.S. 52) which do not include such a commissioner. In *U.S. v. B. & O. R. Co.*, 293 U.S. 454, the Court unanimously upheld a lower tribunal in vacating an I.C.C. order, requiring a certain type of locomotive, without a basic finding that the one in use involved "unnecessary peril to life or limb." The Commission's power is not legislative, said the Court, but judicial; a finding is essential. On the other hand, Frank B. Fox, in his "Administrative Tribunals" (*A.B.A. Journ.*, XXI, 276), objects to the rule, common to such commissions, which renders conclusive their findings "as to facts if supported by testimony." As pointed out by the *American Judicature Soc. Journal* (XIX, 5) "These commissions and administrative courts, obviously determine facts and adjudicate rights; but they have been freed from the incubus of a broken-down jury system."

The Securities and Exchange Commission (1934 YEAR BOOK, p. 360) filed its first annual report, covering the period ending June 30, containing *inter alia* the Rules of Practice in proceedings before it, effective September 13. "The Securities Act and Its Foreign Counterparts" is discussed by Friedrich Kessler in the *Yale Law Journ.*, XLIV, 1133; "The Constitutionality of Federal Regulation of Stock Exchanges," by P. Tennent Norton, Jr., in *Georgetown Law Journ.*, XXIV, 20; "The Securities Exchange Act and the Commerce Clause" by Jacob Lippman, *U.S. Law Rev.*, LXIX, 18. "Administrative Legislation and Adjudication," by Blachly and Oatman, is reviewed in the *A.B.A. Journal* (XXI, 299).

Criminal Law. The outstanding *cause célèbre* of the year was the trial of Bruno R. Hauptmann (1934 YEAR BOOK, p. 363) which opened at Flemington, N. J., on January 2, and ended on February 13 with a death sentence by Justice Trenchard, following a verdict of guilty without recommendation of clemency. This was "cheered" by thousands outside, which, with other spectacular features of the trial, such as the throngs of reporters with their cameras and the installation of a gigantic battery by the Western Union Telegraph Company, were criticized by the press and legal periodicals (see, e.g. *Am. Judicature Soc. Journ.*, XVIII, 186; *United States Law Review*, LXIX, 167). Albert H. Robbins, formerly a Chicago lawyer but now a member of the English bar, discussing "The Hauptmann Trial in the Light of English Criminal Procedure" (*Am. Bar Ass'n Jour.*, XXI, 301), quotes "an eminent English barrister" as writing "that the evidence adduced at the trial would have been sufficient to prove him (Hauptmann) guilty here; though, according to our standards, he did not have a fair trial." On February 27, at the Yorkville Casino,

a crowd of 2500, with an overflow of 3000 outside, gave Mrs. Hauptmann an ovation while she and other speakers declared her husband's innocence. Hauptmann appealed to the Court of Errors and Appeals, which, on October 9, affirmed the conviction (*State v. Hauptmann*, 180 Atl. 809), and in the following month, Hauptmann's attorneys applied to the Federal Supreme Court for a writ of *certiorari*. This was denied on December 9; but meanwhile Governor Hoffman of New Jersey was pursuing a special investigation of the case, preparatory, it was explained, to action by the Board of Pardons, of which he is a member. Hauptmann's execution was, however, set for the week of Jan. 13, 1936.

Probably next in popular interest was the case of Thomas J. Mooney, who, in 1917, was convicted of murder and sentenced to incarceration at San Quentin Prison (Calif.), where he has remained since. *Habeas corpus* applications to Federal courts of all grades, including the highest, were denied, the last named holding that he should have applied to the State courts. (*Mooney v. Holohan*, 294 U.S. 103) In June, the California Supreme Court, which had uniformly ruled against Mooney, found, in the language of the decision just cited, a "mandate" for relief, granted a preliminary writ and appointed a referee to conduct hearings which continued during the last three months of the year. Among other witnesses, the Superior Court Judge (Griffin), who sentenced Mooney, testified that he had since concluded that the prosecution's chief witness was a perjurer.

In May, the New York Supreme Court's Appellate Division upheld conviction of seven Armenians for the murder of Archbishop Tourian (1933 YEAR BOOK, p. 422). Two others, convicted by the General Sessions Court, had failed to appeal after Governor Lehman commuted their sentences to life imprisonment. The Court of Appeals, two judges dissenting, in *People v. Burke*, 267 N. Y. 69, upheld the Appellate Division in reversing the conviction of certain "nudists," who appeared unclad in a basement gymnasium to which the public was admitted for a fee. Less than two weeks later, on May 11, the legislature amended the New York Penal Law in an attempt to include such cases. An editorial in the *U.S. Law Rev.* (LXIX, 346) expresses doubt that the purpose has been achieved.

On November 6, the Texas Court of Criminal Appeals reversed the sentence of a district judge, imposing a fine upon newspaper men for publishing, contrary to his order, the testimony in a pending murder trial which involved others (separately indicted) than defendant. The appellate decision was based on the guaranty, common to many State constitutions, of freedom of the press. On March 18, the Cook County (Ill.) Criminal Court, on a motion by the State's Attorney, entered a *nolle prosequi* of all the untried embezzlement charges against the two Insull brothers. (1933 YEAR BOOK, p. 371; 1934 YEAR BOOK, p. 319).

On August 30, President Roosevelt denied the application for a pardon of Victor Seymour, serving the very brief sentence imposed by District Judge Munger at Lincoln, Neb., for perjury in connection with the attempt to deceive the voters by running an unknown person of the same name against Senator Norris in the primary campaign of 1930. The Senator declined to recommend clemency for one who "has never expressed any willingness . . . to assist in bringing to justice other perpetrators who were undoubtedly behind him in

his attempt at disfranchisement of the voters." The pseudo-Norris was convicted of perjury on December 13.

A Soviet decree of April 8 imposes a minimum penalty of five years' imprisonment for adults who induce crimes by minors. On June 29, Hans Frank, President of the "Academy for German Law," declared, at the close of its annual session at Munich, that "National socialism has completely abolished the principle of false humanitarianism." Premier Siebert of Bavaria added that "a judge must also be a lawgiver, to reconcile old law with national socialist philosophy." A new Estonian statute allows the convicted murderer to choose between hanging and poison. The first to exercise the option chose the former. The Montana legislature considered substituting the lethal gas chamber for the gallows.

The Kansas legislature, in March, restored the death penalty, abolished in 1907, for first degree murderers over 18. But in England, the movement against capital punishment seemed to be making headway. On April 2, a wealthy London widow, long interested in the movement, caused three aeroplanes to fly, with streamers reading, "abolish the death penalty," just as a condemned man was led to the scaffold. Three days later, the House of Lords Judicial Committee, for the first time in its history, it is said, quashed a conviction for murder and freed a 21-year-old Dorset farm laborer, sentenced for murdering his wife. Substitution of castration for capital punishment of desperate criminals and degenerates was recommended by the Kentucky Special Prison Advisory Commission, in its report filed November 23, on the ground that such criminals are "more afraid of desexing than of death."

Legal Education. New Goals. In addressing the Association of American Law Schools (*A.B.A. Journal*, XXI, 141), J. G. Rogers, Master of the new (Yale) Timothy Dwight College, while assuming only "to bring home the extent and reality of changes" now in progress, envisaged these possible results: (1) Fewer and better law schools, with (a) wider scope, even at greater expense, (b) minimum rather than maximum requirements, (c) "some sort of scholarship support . . . on a large scale" for talented though indigent students, (d) closer cooperation with the bar; (2) Fewer and better lawyers, with (a) specialized fields, (b) a cultural outlook, so that "the law will rejoin its old companions, literature, history and the arts," (c) a social outlook, promoting and achieving fundamental reforms in substance and administration, (d) less litigation of the "fake" variety (1934 *YEAR BOOK*, p. 365) and results more expeditious and less erratic, even if more expensive.

Sec. 21 of the Indiana Constitution (of 1851-52), providing that "every person of good moral character, being a voter, shall be entitled to admission to practice law," has long been a stumbling block to advocates of higher standards. In *re Todd*, Ind., 193 N. E. 865, affirms the adoption of an amendment, submitted in 1932 which repeals the above and puts in force an act of 1931 giving the Supreme Court "exclusive jurisdiction to admit attorneys to practice." This is hailed as "the brilliant achievement of bar leaders," by the *Journal of the American Judicature Society* (XVIII, 178).

Dean Green's plan (1934 *YEAR BOOK*, p. 364) for "boards of admission" to replace State "examiners," received approval and amplification by Dean Harold Shepherd, of the Washington State

University Law School, chairman of the A.B.A.'s Legal Education Section's Committee, in an address before the Seattle Bar Association (*Bar Examiner*, IV, 366). He would have "all applicants register at least when they begin legal training," with the boards "continuously functioning, periodically, checking the progress of candidates," assembling all relevant data and evaluating these in their recommendations." Under this plan, which leaves technical examinations to the law schools, the disgraceful situation could hardly have arisen which forced the Kentucky Court of Appeals to order, for January, a special State bar examination, from which 14 candidates at the June, 1934, examination were excluded after it was discovered that the questions, printed in Frankfort, had been obtained in advance and sold. On May 9, the A.B.A.'s Council on Legal Education and Admission to the Bar, announced "provisional approval" of the Loyola University Law School at Los Angeles and the University of San Francisco Law School, both Jesuit institutions.

The Council also announced that the Louisiana State University Law School, which was "placed on the approved list in 1926," had now "been placed in a probationary status . . . by reason of an adviser's report . . . that a law degree has been granted on the direction of the University President and Board of Supervisors, without recommendation by the law faculty and before completion of the course."

The recipient was Kemble K. Kennedy, protégé of the late Senator Huey Long, who had been suspended from the University by its former President, after conviction of criminal libel, reprieved by Long while governor and subsequently pardoned. Kennedy had been denied admission by the Supreme Court; but the "self-governing bar," created by Long-dictated legislation, admitted him to practice on March 2. Just four days earlier, the California Supreme Court (*In re Larine* [Cal] 41 Pac. [2nd.] 161) had denied the application for reinstatement of a disbarred and subsequently pardoned felon, and referred him "to the Board of Governors of the State Bar."

The Vermont supreme court, on May 14, adopted a requirement, effective Aug. 31, 1938, of prelegal training to the extent of one-half the work accepted by an approved college for the bachelor's degree. The Ohio supreme court announced that after July 1, 1939, an applicant for admission must present a diploma or certificate from a law school approved either by the A.B.A. or the League of Ohio Law Schools. After July 1, 1937, pursuant to a recent act of the Texas legislature, the privilege now extended to graduates of 21 law schools, of admission without further examination, will expire. About the end of November, the Georgetown (D. C.) University law faculty, announced the requirement, effective September, 1936, of a college degree for entrance, being the 8th American law school to adopt such a standard. The almost obsolete scheme of local bar examinations, which has lingered on, hitherto, in Arkansas, has at last been supplanted by a state board of examiners, functioning at the capital, though composed of one member from each of the seven congressional districts. Nevada was the 25th State to adopt the two-year's college work requirement for prelegal study.

Among the eminent law teachers who passed away in 1935 were Burr W. Jones, Wis., 87, author of a work on Evidence and former Judge of the Wisconsin Supreme Court; and George

P. Costigan, 64, Professor of Law in the University of California from 1922; Dean Wm. M. Lile, 76, of the Virginia State Univ. Law School.

Legal Profession. The slogan "fewer and better lawyers" seems timely in view of the 175,000 estimated by President Ransom of the A.B.A. as the present membership of the legal profession in the United States, including, of course, many not in active practice. New York State had 18,473 lawyers in 1920 and 27,593 in 1930. In the latter year there were in the whole country 131 lawyers to every 100,000 of the population, as against 22 in France, Germany, and The Netherlands; 40 in other continental countries; and 47 in England, Wales, and Canada. In Colombia, according to *Education* (Bogota), the nine law schools, all but two being subsidized by the government, graduate about 100 lawyers annually, which is more than the country can absorb. Dean Lloyd K. Garrison of the Wisconsin University Law School, writing in the *Wisconsin Law Review* for February, claimed that legal business and opportunities in that State have increased faster than lawyers or population. But Sidney Teiser in the *A.B.A. Journal* (XXI, 42) advocates limiting admissions to the number sufficient to supply losses; and such a plan was actually approved by a referendum of the Philadelphia bar. "The Administrative Bar" which "the United States Government has been slowly, and, perhaps, unconsciously creating" is discussed in an article by William H. Robinson Jr., in *A.B.A. Journ.*, XXI, 277. In a practical discussion of "Brief Writing," Howard C. Westwood, formerly Justice Stone's law clerk, tells us that "nine times out of ten, the statement determines the case" (*A.B.A. Journ.* XIX, 122).

American Bar Association (q.v.). The 57th annual meeting opened at Los Angeles on July 9. The Secretary reported the membership as of June 30 at 27,178—a net gain, over the preceding year, of 1227, but still less than the 1930 figure of 28,667. Of course hardly 10 per cent of these attended the meeting. A new "municipal section" was authorized, as well as a "junior bar" and various pending legislative measures were indorsed. Among the meeting's notable features were the attention devoted to criminal law reform and the contest over the association's presidency. Theretofore nomination by the General Council had been equivalent to election; and that body had nominated William L. Ransom of New York City; but at the general session to which the nomination was reported, James B. Beck of Pennsylvania was also nominated from the floor. The supporters of each candidate passed in procession before the tellers who announced the result as 209 for Ransom and 178 for Beck; only about one-seventieth of the total membership participated.

A third feature was the careful discussion of four plans for coordinating the association with State and local organizations, which have a total membership of over 80,000, none of whom belong to the A.B.A. The plan most favored was a federalization, with a "House of Delegates" and a General Council elected by State organizations, the national association's mass meeting to continue as an assembly or "popular branch." President Ransom actively advocated this plan, speaking on September 19 before the California State Bar at San Francisco and on November 23, before the bars of eight southeastern States in Atlanta. None of this discussion, however, seems to reach a glaring defect in the present constitution and by-laws under which the editor of the *A.B.A. Jour-*

nal is able to perpetuate himself in that position, and also as ranking member of the Association's powerful Executive Committee, without ever coming before the membership for election.

American Law Institute. The 13th annual meeting was held at Washington, May 9-11, President Wickersham presiding. Chief Justice Hughes, as usual, made an address at the opening and President Roosevelt sent a letter approving the suggestion of a model code of criminal law. The proposed final draft of the "Trusts" restatement and a "Double Jeopardy Statute" were approved and parts of restatements of "Property," "Torts," "Restitution," "Unjust Enrichment," and "Land Sales" were discussed.

American Judicature Society. Coincidentally with the last-named, but separately, this organization "to promote the efficient administration of justice" held its annual meeting at Washington on May 8, Pres. Newton D. Baker presiding. Addresses were delivered by Dean Clark of the Yale Law School, Solicitor General Reed, and others. Under the careful editorship of Sec. Herbert Harley, the Society's *Journal*, now in its 19th year, is doing much needed educational work in the field of law reform.

In Soviet Russia, where lawyers are organized into "cooperatives" (unions) and these into "collegia," the latter's "presidium" (council) fixes fees; but the plan has not worked to the satisfaction of either the lawyers or the government, according to Kenneth M. Thorpe (*A.B.A. Journal*, XXI, 60). The "Social Honor Court" of Northmark, Germany, refused to recognize a Jewish attorney, though regularly licensed, and chided the client for employing him and thus failing "to think like a National Socialist and to show respect for racial principles." The New York Legal Aid Society, criticized by Justice Brennan of Brooklyn for accepting nominal fees (ranging from 50 cents to \$10), replied that the practice "tends to maintain self respect, prevents pauperization and gives the client a greater sense of responsibility." Charges of unethical agreements to defend protégés of racketeers, on a prearranged basis, were preferred by the Philadelphia Bar Association against State Senator Samuel W. Salus and five other criminal lawyers, and heard for 11 days by the Court of Common Pleas. Disbarment of Lucius J. M. Malmin and C. W. Larsen (see 1934 *YEAR BOOK*, p. 365) was recommended to the Illinois Supreme Court by the Chicago Bar Association's Grievance Committee.

The "National Lawyers' Committee" of the "American Liberty League" includes about 60 lawyers, a few of them eminent; but, according to Charles Michelson, Democratic Publicity Director, "only about a dozen of them have appeared in the highest court" and but one of these (John W. Davis) has won more cases than he has lost there. The committee was criticized for inviting Justice Carew of New York to join it in passing on the Labor Relations Act (which it pronounced unconstitutional) and also for an offer in its behalf by one of its members (James M. Beck) to "defend the rights of the individual . . . without compensation from any source," referring, according to a press report quoting the League's President, Jouett Shouse, to "litigation over New Deal Laws." The A.B.A.'s Committee on Professional Ethics and Grievances, to which the last-named complaint was referred, expressed the opinion that the said offer was "not unethical" as tending "to stir up litigation," contrary to the

A.B.A.'s Canons of Ethics, 28 (*A.B.A. Journal*, XXI, 776).

Necrology. Charles A. Boston, 71, President, A.B.A. 1930-31; Jeremiah Smith, 64, of the Boston bar, "financial savior of Hungary"; Martin W. Littleton, 63, eminent New York lawyer; Walter R. Henry, 78, noted New York criminal lawyer, formerly of North Carolina and reputed scion of Patrick Henry; William D. Guthrie (q.v.), 77, long a leader of the New York bar, specialist in constitutional and canon law; Ferdinand A. Winter, 91, Indianapolis, once a partner of Benjamin Harrison; Frederick Cobb, 94, a New York practitioner for over a half century; Arthur H. Masten, 81, utility lawyer, nephew of President Arthur, also of the New York bar; Bernard S. Deutsch, 51, President of the N. Y. Board of Aldermen; John Cromwell Bell, 74, of the Philadelphia bar, former Pennsylvania Attorney General and District Attorney; Andrew Sheriff of the Chicago bar; F. Dumont Smith of the Hutchinson, Kan. bar; and George T. Weitzel 62, of the Washington City bar, former Minister to Nicaragua.

"Procedure is important," writes Herbert Harley, of the American Judicature Society, "but not so important as the agents who employ it." Steps have been taken to exercise the authority conferred on the Supreme Court to formulate procedural rules for the lower Federal courts (1934 YEAR BOOK, p. 366). On May 9, before the American Law Institute, Chief Justice Hughes announced the Court's intention "to proceed with the preparation of a unified system of rules for cases in equity and actions at law." An order to that effect was promulgated in June and a committee of 13 lawyers was appointed to assist in such preparation, headed by George W. Wickersham and including two law teachers who had specialized in Procedure—Dean Clark of Yale and Professor Sunderland of Michigan State University. It was announced in November that the committee had just completed its preliminary work. Dean Clark, in a broadcast address before the American Judicature Society (*Journal*, XIX, 11) on May 8, had sketched briefly the history of procedural reform in England and the United States and suggested as a basis of the new draft "the equity rules of 1912, extended to all actions, legal and equitable, and supplemented by provisions taken from the most successful state systems." Dean Clark and J. W. Moore had also contributed two comprehensive articles to the *Yale Law Journal* (XLIV) on "A New Federal Procedure": (I) "The Background" (387); (II) "Pleadings and Parties" (1291). Professor Sunderland, on June 6, before the 4th judicial circuit conference, discussed at some length the "Character and Extent" of the Supreme Court's power in this matter (*A.B.A. Journ.* XXI, 404). The new Philippine Const. (VIII, 13) makes all procedural statutes "Rules of court subject to the Supreme Court's power to alter and modify them."

An electrical voice-producing machine, for reporting trials and other proceedings, was demonstrated before the Chicago Bar Association on October 31, enabling, it is claimed, the reviewing court to reproduce a trial at an expense no greater than the present reporting system. By way of contrast it appears that British trial judges are without even shorthand reporters, a movement to supply the latter having just been initiated. Under the new California law permitting the trial judge to comment on the evidence, a jury in a murder

case was advised from the bench to convict the female defendant.

Proof. "Rules of evidence are intended neither as regulations in a game, where the most skilful technician wins, nor as barriers to the simple, straightforward and complete development of the facts," observes Kenneth Dayton in his "Program for Law Reform" (*The Consensus*, XVI, iii). He criticizes particularly witness-badgering and the generality of objections. A loose-leaf book was recently excluded from evidence, as unreliable, by Justice Bennett in London.

In an article in the *Virginia Law Review* (XXI, 763), R. Carter Pittman traces "The Colonial and Constitutional History of the Privilege Against Self-Incrimination in America" (see 1933 YEAR BOOK, p. 429), and finds it established in England in the 1650's and brought to America by the Puritan colonists; but that the only constitutional document which recognized it before 1776 was the Scotch "Claim of Rights." On the other hand the privilege is ascribed to an Act of Parliament in 1641, by W. Earl Smith (*Am. Jud. Soc. Journ.*, XIX, 114) who pronounces it "one of the greatest anomalies of the law . . . and of all our out-moded machinery should be the first to go." Incidentally, however, it was incorporated into the recently adopted Philippine Constitution (III, 1 (18)). "Rules Governing the Allowance of the Privilege" is the subject of an article by M. P. Rapacz in the *Minnesota Law Review* for March.

Blood tests of suspected parties, and comparison thereof by judges with other evidence, are authorized in an act approved by Governor Lehman of New York, March 26, after the practice had been disapproved by some Courts (1933 YEAR BOOK, p. 430; 1934 YEAR BOOK, p. 367). Hailing the New York statute as "a signal light and . . . another forward step in medico-legal jurisprudence," Wm. L. Flack, in an article on "Evidential Value of Blood Tests to Prove Non-Paternity" (*A.B.A. Journ.* XXII, 680), summarizes the scientific data, literature, and judicial authority on the subject, and concludes that, if certain difficulties can be overcome, "the demonstrable value of such tests . . . will be amply confirmed."

Circumstantial Evidence. The Talmudic law required direct evidence, and the conviction of Bruno Hauptmann upon purely circumstantial evidence (for no one claims to have seen him in any act of committing the crime charged) evoked considerable discussion of the reliability of such evidence. On the one hand it is claimed (by Attorney-General Cummings among others) to be often stronger than direct; but Professor Borchard of the Yale Law School, author of *Convicting the Innocent*, relates "how the error occurred and how it was later discovered" in 65 cases where conviction rested upon circumstances.

"Expert Testimony is obsolete," Souder tells us; but the Duke University School of Law, in its illuminating series on "Law and Contemporary Problems," devotes an entire number (II, 4, Oct.) to Expert Testimony. A. S. Osborn in the *A.B.A. Journal* (XXI, 151) shows the need of "Cooperation of Attorney and Expert Witness," and the outstanding witness in the Hauptmann case was Koehler, the dendrologist. Clearly, the trend is toward scientific evidence, for at best human testimony is fallible and often wrong, even with the best intentions. The U.S. Bureau of Investigation, with its "Crime Laboratory," is doing much to develop a really scientific scheme of proof. Its Director, J. Edgar Hoover, discusses its work in

the *Tennessee Law Review* for April, and "Scientific Methods of Crime Detection" in the *George Washington Law Review* (IV, 1).

Fingerprinting (see 1934 YEAR BOOK, p. 366), which is claimed to have been the subject of a Bologna professor's treatise in 1686, is discussed in a small but informing volume (Chicago, 1935; rev., *A.B.A. Journ.* XXI, 820) by T. G. Cooke, a teacher of the art and former student at Scotland Yard which claims 500,000 fingerprints. "Attempts to Alter and Obliterate Fingerprints" is treated by Harold Cummins in the *Journal of Criminal Law & Criminology* for March-April. It is claimed that forged fingerprinting may always be detected and that the identity of two distinct fingerprints is practically impossible. The subject is pursued in a series of valuable pamphlets issued by the U.S. Bureau of Investigation whose criminal fingerprint file now numbers 5,000,000, "the largest collection of current value in the world," and its "civil identification file," only three years old, more than 60,000. Fingerprinting figured in the Hauptmann defense, when Dr. E. M. Hudson testified to 500 prints on the "kidnap" ladder, although the police had reported none; in the trial of the "Barker gang" at St. Paul and in the detection of "job seekers" with criminal records. Universal fingerprinting is advocated by Governor Lehman of New York (who was himself fingerprinted on December 12) and Attorney-General Hartigan of Rhode Island. All applicants for licenses, passports, receipts, etc., in Brazil, must be fingerprinted and photographed. Palm prints of newborn children were urged as the surest mode of identification by Dr. G. P. Pond, before the Illinois Homeopathic Medical Association on May 10.

"Lie Detector." Use of this unique instrument (1934 YEAR BOOK, p. 367; *Scientific Monthly*, XL, 81, article by Fred E. Inbau) was extended during the year. It was received as corroborating evidence in court (for the fourth time) in an action by a stevedore for disability compensation at Buffalo; to offset the scent of bloodhounds in a prosecution for burglary at Monroe, Wis.; and to obtain a confession from a murder suspect in Chicago. See MEDICAL JURISPRUDENCE.

CONSTITUTIONAL AND PUBLIC LAW

America (UNITED STATES OF). Amendments. The proposed "Child Labor" amendment (1934 YEAR BOOK, p. 367) has now been ratified by 24 of the required 36 legislatures, Idaho, Indiana, Utah, and Wyoming having done so during the year; 16 have rejected it. On the opening day of the 74th Congress, Senator Costigan of Colorado offered a proposed amendment, which was referred to the judiciary committee, empowering Congress "to regulate hours and conditions of labor . . . establish minimum wages . . . and . . . prevent unfair methods" in industry. This was much discussed after the NRA annulment.

Constitutional Decisions of the year have been numerous and important. The National Industrial Recovery Act of June 16, 1933, was construed in two Supreme Court decisions, each finding invalid the portion construed. In *Panama Refining Co. v. Ryan*, 293 U.S. 388, the court, Justice Cardozo dissenting, held sec. 9c of the act, purporting to authorize the President to control interstate and foreign traffic in petroleum above a certain limit, an unwarranted attempt to delegate legislative power. In *Schechter Poultry Corp. v. U.S.* 295 U.S. 495, provisions of the "Live Poultry

Code," promulgated under sec. 3 of the act, were unanimously declared invalid, not alone for the reason just mentioned, but also as an "attempted regulation of intrastate transactions which affect interstate commerce only indirectly." In consequence, Congress, on June 14, by joint resolution, repealed "all provisions of Title I of such act, delegating power to the President to approve or prescribe codes of fair competition," etc. On December 31, the NIR Administration was terminated by executive order. The last cited decision is the subject of several articles in law reviews, including one in the *St. Louis Law Review* for June. The Frazier-Lemke moratorium amendment of the Bankruptcy Act was held, in *Louisville, etc. Bank v. Radford*, 295 U.S. 555 to offend "due process of law" in depriving the mortgagee of his (1) lien before payment; (2) right to foreclose upon default; to control the mortgaged property pending foreclosure; and to bid at the sale. Justice Brandeis, writing the unanimous opinion, found it unnecessary to "consider the occupations of the beneficiaries" (farmers). The Railroad Retirement Act of June 27, 1934, was declared by a bare majority of the Court, in *R.R. Retirement Board v. Alton R. Co.*, 295 U.S. 330, "an attempt, for social ends, to impose by sheer fiat, non-contractual incidents upon the relation of employer and employee," not as a regulation of commerce between States. The Chief Justice and Justices Brandeis, Cardozo, and Stone dissented. In *Grovy v. Townsend*, 295 U.S. 45, the court found no State action, and hence no ground for Federal interference in a party committee's resolution limiting to "white citizens" the privilege of participating in a party primary. (See also *Courts, Contracts*.)

Interstate Cooperation. Compacts between American colonies were not unknown before the Revolution. As early as 1725 the boundary between New York and Connecticut was delimited by their respective commissioners. But the Federal Constitution (1, 10) required "the consent of Congress" for such compacts and about 70 of them have been so validated. The year 1935 was marked by renewed activity in that field, which was aided by the "Council of State Governments" organized for "promoting regional agreements," etc., which provides regional secretaries and to cooperate with which state commissions have been created in Colorado and New Jersey. Jointly with the American Legislators' Association, the Council sponsors an interstate assembly, whose second annual session opened in Washington on February 28. Among its recommendations were: "a general enabling and consenting act respecting compacts negotiated between . . . States, affecting interstate tax conflicts"; cessation of State taxes on beer and tobacco and of Federal taxes on motor fuel and electrical energy; abolishing exemption of salaries, securities, and private property on government reservations. (See *A.B.A. Journ.*, XXI, 207)

Boundary disputes occasioned no less than 17 of such compacts before 1900, as well as various actions in the Federal Supreme Court. (See 1934 YEAR BOOK, p. 368.) *Wisconsin v. Michigan*, 295 U.S. 455, was a proceeding to correct "the Green Bay section of the boundary between these States," the whole of which had been fixed previously (270 U.S. 295). It involved a "triangular area at the Menominee's mouth" (over which "neither State has ever exercised jurisdiction") and certain waters of the bay, through the middle of which the Court directed the new boundary to be drawn.

In *Ackerman v. Clarke*, 278 N. Y. Suppl. 75, the Appellate Division, reversing Justice Collins, held that, despite the interstate compact of 1834, the New York courts had no jurisdiction of an injury incurred on the George Washington Bridge, 800 feet west of its centre.

Criminal jurisdiction has been extended into another State, over boundary waters, in eight of these compacts. Further extension to authorize arrests by pursuing officers, return of witnesses, supervision of paroled persons and maintenance of joint detection agencies, was advocated in a paper before the Crime Conference in Washington by Gordon Dean. (*A.B.A. Journ.* XXI, 89.)

Petroleum conservation was the object of a compact adopted at Dallas, Tex., on February 16, following the decision in *Panama Refining Co. v. Ryan*, 293 U.S. 388, later ratified by the legislatures of Colorado, Illinois, Kansas, New Mexico, Oklahoma, and Texas, recommended for ratification by representatives of Arkansas and Michigan and approved by joint resolution of Congress in the closing days of its 1935 session.

Waters. The New York and New Jersey legislatures joined in a compact (into which Connecticut was also invited) to prevent the pollution of New York harbor waters. Joint commissions were created.

A resolution was also pending in Congress approving a compact between four States "for an equitable division . . . of the water supply of the Little Missouri" and a bill approving a compact between Wyoming and Montana for dividing the Yellowstone's waters. Nebraska and Wyoming, having failed to agree regarding apportionment of the North Platte's waters, the former brought suit against the latter in the Federal Supreme Court, which refused to dismiss it at the defendant's instance (295 U.S. 40).

Legislation. The volume of the legislative output was among the greatest of any year. Besides the voluminous acts of Congress, during a session of 235 days, and the acts of the State legislatures, most of which were in session during the year, there was a vast number of executive and administrative orders and regulations, of which the NRA alone issued thousands, before its enabling act was declared unconstitutional. This phase of the subject is treated from a hostile standpoint in an article on "Government in Ignorance of the Law," *Harvard Law Review*, XLVIII, 198, by Edwin N. Griswold, whose retirement from the Department of Justice was an incident of the "New Deal."

Local Government. There are over 3000 organized counties in the United States, with no uniformity in area, population, or economic status. The American County Association, composed of county officials from the country at large, discussed, at its recent meeting in Chicago, the question of retaining the present system. The movement for county consolidation (1934 YEAR BOOK, p. 368) is gaining in the South and the adoption of the "home rule" amendment in New York (See REFERENDUM) opens the way there to important reforms in county government. Monroe County (containing Rochester) adopted the county manager plan, which was also extended in Virginia. The Pennsylvania legislature approved the submission of a constitutional amendment providing for the consolidation of the city and county of Philadelphia and the Delaware legislature passed an act for extending the Wilmington city limits to low water mark on the Jersey shore of the Delaware, in accordance with the Federal Su-

preme Court's decision (1933 YEAR BOOK, p. 431). Toledo adopted the city manager plan and has already selected a manager; but in Cincinnati, where it has worked with marked success for over a decade, partisanship threatened its continuance. Not only was the plan defeated, three to two, for Hamilton county, but of the nine councilmen chosen November 5, four are partisans and, presumably, opposed to the whole scheme.

Philippines. The constitutional convention closed its labors in Manila on February 8, after sessions lasting nearly six months, although important changes were effected in the instrument (17 arts.) adopted the night before adjournment. It was ratified by popular vote on May 14 and requires (VIII, 8) two-thirds of the Supreme Court to adjudge unconstitutionality. The new commonwealth was inaugurated on November 15. See PHILIPPINES.

British Commonwealth and Empire. Australia. On May 24 (Empire Day) the British parliamentary joint committee on Western Australia's petition to secede from the Commonwealth, reported that Parliament could take such action only upon a request from the Commonwealth itself.

Canada. On June 6, the Judicial Committee of the Privy Council (final court of appeal for the colonies and dominions) denied the *Petition of the British Coal Corp.* for an appeal from conviction by a Quebec court, of illegal combination to maintain prices; thus upholding the 1932 act of the Dominion Parliament, abolishing appeals in criminal, though not in civil, cases. The conference of Dominion and provincial premiers, which closed at Ottawa on December 13, resolved *inter alia* to seek a revision of the British North America Act, so that changes therein might be effected without appealing to the British Parliament.

Irish Free State. On June 6 the Judicial Committee (*supra*) also construed the Statute of Westminster (1931 YEAR BOOK, p. 454) as so modifying the Anglo-Irish treaty of 1921 as to permit the Dail to abolish appeals to the Privy Council in all cases. On December 12, the Dail, for the second time, and after an acrimonious debate, voted (76 to 57) to abolish the Irish Senate. The latter body, on December 18, deferred consideration of the measure until Jan. 15, 1936. See IRISH FREE STATE under History.

Newfoundland. The Overseas Trade Department reported encouraging evidence of business improvement, promising resumption of dominion status in the not distant future.

Palestine. On December 21, the long-expected announcement was made at Jerusalem, by High Commissioner Wauchope, of the proposed Legislative Council, to consist of 11 Moslems, 7 Jews, 3 Arabic-speaking Christians, 2 "merchants" (one of whom was expected to be a Jew) and 5 government appointees, all holding for 5 years. The Arab leaders reserved answer; but the Jews of all shades rejected the plan. The World Zionist Organization had already declared against it and the head thereof, Dr. Chaim Weitzmann, on December 26, called for a mobilization of world Jewry to combat it as a "régime which gravely jeopardizes the freedom of our development and the progress of immigration and settlement." The High Commissioner is empowered to nominate representatives of non-participants.

Other Countries. A translation of the new Brazilian Constitution (186 arts. with 26 transitory) is one of the year's many valuable publica-

tions by the Department of Commerce (Commercial Laws' Div.). In a brief but thoughtful "Foreword," the translator, H. P. Crawford, pronounces it exceptional as a "grant of power, enumeration of restrictions, bill of rights and source of law."

On April 29 the Supreme Tribunal of Ecuador declared unconstitutional the Guayaquil municipal ordinance requiring pasteurization of milk. On March 21 the Greek cabinet issued decrees abolishing the Senate and effecting other constitutional changes. The new Polish Constitution came into force on April 24.

PRIVATE LAW

American law is not the only system which is undergoing restatement; a movement to that end, even more intensive and characterized by the national trait of thoroughness, has been for some time progressing in Germany. Not only is the objective unification—*ein Reich, ein recht*—but all features of the pre-Nazi régime are being eliminated as fast as possible. It is estimated that over 80,000 laws, many of them police regulations, have been examined for that purpose and some have already been abrogated, including provisions enacted less than a decade ago. "The Laws of England, in the 13th Century" are the subject of an article by Charles S. Lobingier, in the *China Law Review*, VIII, 153-191.

Conflict of Laws. The American Law Institute's Restatement "is a matter of the highest importance for all practitioners and students of this branch of law, not merely in the United States but also in all the British dominions where the Common Law holds," according to A. B. Keith, University of Edinburgh (*A.B.A. Journ.* XXI, 237), who further asserts that "it concerns even those territories . . . where a different system prevails" but where "the Privy Council, as the final arbiter, inclines to apply the (same) doctrines." A recent instance is *Alaska Packers' Ass'n. v. Cal. Accident Comm'n.*, 294 U.S. 532, affirming 34 Pac. (2d) 716, where an employee under a contract made in California, to be performed in Alaska (where he was injured), was given the benefit of the California Workmen's Compensation Law. Other recent works of importance in this field are, Cheshire, *Private International Law* (rev. *Law Quar. Rev.*, LI, 537; *Harvard Law Rev.* XLIX, 198); Schoch, *Actionability, Procedural Rights and Proof in International Law* (rev. *A.B.A. Journ.* XXI, 374).

Contracts. The American Law Institute's "Restatement" is discussed, in the *Temple Law Quarterly* for April, by its principal author, Prof. Samuel Williston of Harvard Law School, who has also recently published a text book on the subject. Outstanding developments in this field have been the varied interpretations of the clause in contractual obligations, requiring payment in gold coin. Netherlands courts led the way by deciding that when such obligations were subject to American law, they were payable in the devalued dollar and not in the gold dollar, although calling for gold coin.

On February 18, the United States Supreme Court rendered three decisions (*Norman v. B. & O. R. Co.*, 294 U.S. 240; *Norts v. U.S.*, *ib.* 317; *Perry v. U.S.* *ib.* 330) likewise affirming the debtor's right to discharge such obligations with the devalued dollar. (See also 1934 *YEAR BOOK*, p. 369.) "The contention that these gold clauses are valid contracts and cannot be struck down,"

wrote the Chief Justice, who prepared the opinions in all three, "proceeds upon the assumption that private parties . . . may limit that authority . . . of Congress to establish a uniform currency and parity between different kinds of currency." Articles in the following periodicals reflect the wide interest, professional and lay, in these decisions: *Georgetown Law Journal* for March and May, by Phanor J. Eder; *University of Penna. Law Review* for April by John Dickinson; *Harvard Law Review* for May by Henry M. Hart, Jr.

On the day following these "gold clause" decisions, President Mendieta of Cuba issued a decree (a recognized mode of legislation there) legalizing the contract of "option," which, it is explained, the preexisting law "neither defines nor regulates." It provides a summary remedy in the nature of specific performance. The contract of insurance in Denmark is treated from the commercial standpoint in a bulletin of the Department of Commerce (Commercial Laws Div.), issued on December 5. A recent enactment of the New York legislature (Sec. 793 of the Civil Practice Act) seems to have revived imprisonment for debt which was abolished there in 1831. The Brooklyn Appellate Division of the Supreme Court has upheld the constitutionality of the new act but it has yet to be passed upon by the Court of Appeals.

Corporations. Probably the year's most important piece of corporate legislation was the "Public Utility Holding Company Act" of Congress, approved August 26, after a long and bitter controversy. Title I, which consists of 33 sections, many quite long and with numerous subdivisions, is the part affecting "holding" (restricted to gas and electric) companies (Title II contains only "Amendments to Federal Water Power Act") which were required to register with the Securities and Exchange Commission, administering the act, before December 1; in fact only about 60 companies did so. Sec. 11 is the most controversial one, being known as the "death sentence clause," for it empowers the Commission "to limit the operation of the holding company system . . . to a single, integrated public utility." On November 7, at Baltimore, U.S. Dist. Judge Coleman, in an opinion covering over 100 printed pages (*In re Amer. States Public Service*, 12 Fed. Supp. 667), declared void the entire act (Title I) as unwarranted by the commerce or postal clause of the Federal Constitution and as infringing due process of law. The case then was carried to the Court of Appeals of the 4th circuit. If the act is upheld even in part, it may mark a step toward Federal supervision, if not organization, of all corporations (1934 *YEAR BOOK*, p. 370) and thus facilitate the much needed restoration of corporate control to stockholders. A large number of companies affected by the act combined in various other proceedings to test its validity. "Sec. 77B, added to the Bankruptcy Act, June 7, 1934, is a corporation reorganization law," writes John Hanna, introducing an informing article (*A.B.A. Journ.* XXI, 73) to which a valuable bibliography of the subject is attached. Another is "Corporations Amenable to Sec. 77B," by Jacob I. Weinstein (*Univ. of Penna. Law Rev.*, May). But a transfer of assets by one corporation to another, for the purpose of evading income tax, is not a "reorganization" under the Revenue Act of 1928 (112g). (*Gregory v. Helvering*, 293 U.S. 465.)

The Canadian premiers' conference at Ottawa in December adopted a programme including an uniform companies act for the whole Dominion.

"Company and Corporation Law of Brazil," the "Corporation Laws of the (Five) Central American States," and "Japanese Export Guild Law" are among the year's valuable publications of the U.S. Department of Commerce (Commercial Laws Div.). "The Juridical Status of Non-Registered Foreign Corporations in Ecuador" is discussed by V. E. Greaves in the *Tulane Law Review* for April.

Delicts (Torts). The American Law Institute's "Restatement" of the Law on this subject (1934 YEAR BOOK, p. 370) called forth several informing reviews, e.g. in the *Illinois Law Review* for January, by Dean Leon Green; in the *University of Pennsylvania Law Review* for June by A. L. Goodhart; in the *A.B.A. Journal*, XXI, 236 by L. W. Feezer. "The Obscurity of Tort" is the subject of an article by R. E. Ireton (who appears to overlook the "delictual obligations of the Civil Law") in the *United States Law Review* for June. In the *Minnesota Law Review* for May, Vold discusses "The Basis of Liability in Radio Defamation." An instance of that subject's growing importance is the \$100,000 libel action by a Pittsburgh hotel company against the National Broadcasting Company and "Al" Jolson (comedian) for the latter's remark, "that's a rotten hotel," during a nation-wide radio programme on June 19. The Trinidad libel law, in force for nearly a half century, was amended, April 5, by granting the privilege of reporting public meetings. The Montreal Superior Court allowed recovery by a mother against her 19-year-old daughter, for an injury caused by the latter's excessive speed in driving her car.

Among recent publications in this field by the Department of Commerce (Commercial Laws Div.) are the new Workmen's Compensation Law for Grenada, amendments of the Argentine law on that subject, and a summary of that of Hawaii.

Domestic Relations. Under an act of the Connecticut General Assembly, effective Jan. 1, 1936, an applicant for a marriage license must submit to a blood test, present a physician's report thereof, and wait five days for the license. A sure result is the reduction of applicants from other States. Governor Curley has virtually effected a repeal (at least temporarily) of the civil marriage law of Massachusetts by warning all justices of the peace that they will not be considered for reappointment if they perform marriage ceremonies. A bill in the Ontario legislature makes the Dionne "quintuplets" "wards of the King." A decision of the Soviet Supreme Court, supposed to be directed at grandparents, on June 2, penalized those who teach religion to children without their parents' consent. A surplus of spending money advanced to the wife belongs to the husband under a recent New Jersey decision. The new Siamese law, in force October 1, requires registration of all marriages and declares the husband to be the head of the household.

Breach of Promise, etc. A notable feature of current State legislation is the outlawry of actions for breach of promise, alienation of affections, criminal conversation, and seduction which was enacted in Illinois, Indiana, and New York and was considered in Michigan, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, Oregon, Texas, and Wisconsin. Only in Missouri was it definitely rejected. The arguments of James Schouler (1933 YEAR BOOK, p. 435) are meeting with *post-mortem* acceptance. The whole subject

is treated by Prof. N. P. Feinsinger in *Wisconsin Law Rev.*, X, 417.

Divorce. Grounds added by an act of Congress for the District of Columbia (August 7) are: desertion for two years, voluntary separation for five (virtually permitting divorce by mutual consent), conviction of felony and cruelty (effective two years after decree). A German court in Koeslin granted a divorce to a husband because his wife refused to bear children. The new Siamese law (q.v. *supra*) provides for divorce by mutual consent or for the wife's (but not the husband's) infidelity. A new Florida statute reduces to 90 days the required residential period for divorce; but decrees based on the corresponding Nevada statute were declared void in Kentucky and France.

A Soviet divorce was denied recognition in Illinois and a Mexican divorce in New Jersey. A bill to bar use of the mails to further such a divorce was introduced into the lower house of Congress. In May, the Jewish Rabbinical Assembly approved divorce to a deserted wife (*agunah*) without the husband's consent; but the "Union of Orthodox Rabbis" repudiated the action as "absolutely contrary to Jewish Law." Anglican bishops in Canada protested against the Quebec practice of annulling marriages on the sole ground that the parties were not of the same religious faith. The demand for a Federal divorce law in the United States is voiced by Louis A. Stone, attorney for the Legal Aid Bureau. The new divorce law of Ecuador requires one year's residence acquired by actual domicile or by "entering into contracts with the government"—a process not yet fully explained.

Property. Feudal Tenures, whose vestiges linger in some parts of the world, lost more ground in 1935. The remaining incidents of "copyhold," described by the *London Law Times*, as "perhaps the most ancient, and certainly the most diversified, of our tenures," practically ceased to exist as the result of legislation enacted in 1922, but whose enforcement was postponed. In Quebec, where the feudal régime has lasted longer than elsewhere (see Lobingier, "The Rise and Fall of Feudal Law," *Cornell Law Quarterly*, XVIII, 229), the final negotiations for repurchase of seignories and abolition of feudal rents were being conducted by a Commission appointed during the year.

Industrial. April 30 saw the issue of Patent No. 2,000,000 by the U.S. Patent Office, which reaches its first centenary in 1936. Up to 100 years ago but 9957 patents had been granted by the United States—the first bearing date July 31, 1790. The year ending June 30, 1930, saw the largest number of patent applications—91,430. About 90,000 United States patents are issued each year; but there are loud complaints from inventors and demands for reform. In view of the uncertainties of patent litigation (1934 YEAR BOOK, p. 372) and of the fact "that the Supreme Court has invalidated 65 per cent of the patents considered since 1880," the proposal for a single Court of Patent Appeals, equipped with experts in engineering and law, with technical advisers whose findings will be conclusive, seems justified. Publishing applications before issue of patents is also advocated by the Science Advisory Board as a means of settling conflicts in advance.

The Trappist monks who brought an action in the Antwerp Commercial Court against a brewer who made and sold beer similar to theirs, were non-suited on the ground that their charter, and the purposes of their organization, precluded their classification as traders, doing business for profit.

The Chinese Administrative Court at Nanking holds that a trade-mark, registered without designation of color, is not protected as to that element and that the size of the mark is not a factor in determining infringement. A Nevada trade-mark bill, withdrawing protection as a penalty for non-compliance, was vetoed by Governor Kirman on the ground that it was confiscatory and would lead to unfair competition. Similar bills were before the legislatures of Maryland, New Jersey, and New York. Peru has adhered to the Pan-American Trademark Protective Convention of Feb. 20, 1929.

Torrens Land Registration System (1934 YEAR BOOK, p. 372) needs more funds to make it effective in New York, according to testimony before committee now investigating the subject. The system has been in vogue in Hawaii since 1903 and about one-third of Oahu's total area has been registered according to P. C. Morris of the Honolulu bar, in a paper before the visiting delegation of the A.B.A. (*Journal*, XXI, 649).

Wills. Royal testaments of ancient date were discovered and translated by a young Persian, cataloguing a collection of oriental MSS. recently presented to the Philadelphia Free Library. That of Ahmed Pasha, Grand Vizier of two Turkish Sultans, was executed in 1512 and devoted a vast estate, including whole villages in both European and Asiatic Turkey, to alms and mosque building. Another, executed in 1706, by Shah Muhammed Hussain, provided a funeral parlor for indigent Moslems. The Canon Law has contributed so much to the Anglo-American law of wills, that it is a privilege to notice a work on *The Canon Law of Wills* by Rev. Jerome D. Hannan (1935; reviewed *Georgetown Law Journal*, XXIV, 320).

The last testament of Henryk Sienkiewicz, famous Polish novelist, was recently probated at Warsaw, nearly 19 years after his death, having been discovered in a summer house occupied by him during his last year. Restrictions in the wills of the late Mrs. Elbert H. Gary and John E. Andrus occupied the attention of New York Surrogate Courts during the year. A provision in the last named (whose trust funds aggregated \$30,000,000) requiring beneficiaries' written approval of all acts of the trustees, was pronounced an unprecedented *in terrorem*, contrary to public policy and to the State and Federal constitutions. The equitable doctrine of *cy pres* (as near as) applied in construing a testator's intent, has been found workable and helpful in promoting the purposes of the New York Community Trust, according to its current report.

The difference in concept and content between the civil law testament and the Anglo-American "will," is well illustrated by the instrument executed, some 2¼ years before his death, by the late Dr. Alfredo Colmo, Argentine jurist and sociologist, which fills a column of print in the *United States Law Review* (LXIX, 502). The testator recites his ideals and aspirations, admonishes his surviving relatives, but, in disposing of his property, makes no change in the course of intestate succession except as to his library. By way of contrast, we have the following direction regarding an \$11,000 estate, probated at Pittsburgh: "Everything I have to Arthur." The civil law practice of authentication during the testator's life, thus avoiding *post mortem* contests, with their inevitable expense and uncertainty, is advocated by Harry Kutscher in an article on "Living Probate" (*A.B.A. Journ.* XXL, 427) but op-

posed by the Law Reform Committee of the New York City Ass'n of the Bar. (*U.S. Law Rev.*, LXIX, 623).

LAWRENCE, COL. THOMAS EDWARD. A British scholar and soldier, known as "Lawrence of Arabia" and "T. E. Shaw," died at Wool, Dorsetshire, May 19, 1935, the result of a motorcycle accident. He was born at Portmadoc, Carnarvonshire, Wales, Aug. 15, 1888, and educated at the High School, Oxford, whither his parents had moved, and at Jesus College, Oxford University, winning first class honors in modern history in 1910. In that same year he went on a walking tour through Syria and while there he picked up a knowledge of Arabic which was later to stand him in good stead, and which, with his interest in and knowledge of archaeology, brought him to the attention of D. G. Hogarth, then preparing an expedition to Jerablus on the Euphrates to excavate Carchemish for the British Museum. Through the aid of a postgraduate endowment from Magdalen College, Oxford, he was enabled to join this expedition in 1911, remaining with them until 1914, except for the winter of 1913-14, when he was assigned to the Palestine Exploration Fund and was attached to the Survey of North Sinai.

At the outbreak of the World War he was assigned to a post in the geographical section of the War Office, but after Turkey had joined the Central Powers, he was sent by Lord Kitchener to Egypt and attached to the Military Intelligence Service. He became a moving spirit in the Arab revolt and in the establishment of the Arab Bureau early in 1916, and acted as staff and intelligence officer for the Arab campaigns. In the autumn of that year he asked for leave to go to Jidda and effect a closer liaison between the British and the Arabs. Permission was granted and he was transferred to the Arab Bureau under the Foreign Office.

Believing that Feisal was the strongest of Sherif Hussein's sons, he persuaded the Sherif to let him go into the interior to visit Feisal and his force, which had been driven back from Medina. He soon won the confidence of Feisal and induced him to reorganize his army and move north to attack the Hejaz Railway, thereby threatening Medina. With Feisal at Wejh, and the army of another brother, Abdulla, at Wadi Ais to cooperate, Lawrence went farther into the interior to raise the northern tribes against the Turks. With his forces he pushed beyond Baalbek—behind the enemy lines in Syria—and on coming back picked up a Huweitat force under Auda Abu Tayyi, defeated a Turkish battalion near Maan, and forced a passage to Akaba, which was occupied for Feisal in August, 1917. For his exploits here he was promoted to field rank and awarded decorations by the British and French Governments, which he refused.

Colonel Allenby, assisted by Lawrence, organized and led an armed force in battle at Wadi el-Hesa near Esh Shobek, where the enemy suffered its worst defeat in the open. He soon isolated Medina by his train-wrecking expeditions, and early in 1918 attempted to cut the Turkish Palestine army's railway communications with Damascus, but failed by a small margin. By the summer, with the cooperation of Allenby, he had persuaded Feisal to move to Qasr Azraq and organize a new attack on Damascus. In the autumn, Feisal's forces moved up with Allenby's, and together they broke up the enemy's trans-Jordan Army,

and the Arabs, reaching Damascus before Allenby, entered the city and held it for his arrival.

Invited to the Peace Conference at Paris in 1919, Lawrence became one of its outstanding figures by merit of his legendary fame. However, because he was unsuccessful in his plans for an Arabian kingdom he left the Conference. He was elected a research fellow of All Souls, Oxford in that same year. In 1921, Winston Churchill called him to the Foreign Office as an adviser in Arabian affairs. In the following year, feeling that the Allies failed to fulfill their moral obligations toward the Arabs, and disgusted at his own part in what he considered their betrayal, he quit the government service, abjuring all honors and enlisting as a mechanic in the Royal Air Force under the name of "Ross." His identity soon became known and in 1923 the unwelcome publicity attendant led to his transfer to the Tank Corps, being retransferred to the Air Corps in 1925. Two years later he had his name legally changed to T. E. Shaw. He served in India on the northwestern frontier but rumor again credited him with revolutionary exploits, and in 1928 he was recalled. From that time until his death he remained in the Air Corps.

In 1926, Lawrence wrote his account of his Arabian campaigns under the title of *The Seven Pillars of Wisdom*, which he published privately, and which received great praise from the critics. In the following year, in order to defray the expenses of his publishing venture, he issued a popular version under the title, *Revolt in the Desert*. A trade edition of *The Seven Pillars* was published posthumously in September, 1935. His translation of Homer's *Odyssey* was published in 1932.

The legend of Colonel Lawrence has caused considerable controversy, although no one denies his evident genius. He has been considered a *poseur* who claimed he wanted anonymity, when his own envelopment of himself in mystery brought him further into the spotlight. Others claimed that he was sincere in his desire for a private life, but that circumstances over which he had no control raised obstacles in his path to this end. Regardless of whether or not he sought notoriety, his was a life that few men have the opportunity of living, and one that will become more securely a legend as the years roll on.

LAWRENCE COLLEGE. A coeducational institution in Appleton, Wis., founded in 1847. For the autumn term of 1935, 705 students were enrolled in the college of liberal arts, 312 in the conservatory of music, and 38 in the institute of paper chemistry, a graduate school affiliated with the college. There were 65 members on the faculty of the college, 19 on that of the conservatory, and 45 on the staff of the Institute. The endowment, exclusive of buildings and equipment, amounted to \$1,732,931; the income from endowments for 1935 was \$61,932. The library contained 110,608 volumes. President, Henry Merritt Wriston, Ph.D.

LEAD. The production of recoverable lead in the United States in 1935 amounted to 330,680 short tons, as compared with 287,432 short tons in 1934, according to a preliminary report of the U.S. Bureau of Mines. The major production, as usual, was in Missouri with 97,520 tons, followed by Idaho with 76,400 tons, and Utah with 64,090 tons. Oklahoma was fourth in the list of producing States with 24,260 tons. For the first four weeks of the year the average weekly price for lead concentrates was \$36 a ton. In the next two weeks it dropped to \$32 a ton, rising gradually to the

highest level, \$47 a ton, for the last 15 weeks of the year.

According to the American Bureau of Metal Statistics the refined lead production of the world in 1935 amounted to 1,569,670 short tons, as compared with 1,494,743 short tons in 1934. By countries the production of refined lead, in short tons, was distributed among the leading producing countries as follows: United States, 376,646; Australia, 245,052; Mexico, 198,077; Canada, 162,992; Germany, 142,535; Burma, 80,710; Spain, 76,893; Italy, 39,477; Tunis, 27,288.

LEAGUE OF NATIONS. Italo-Ethiopian Dispute. Relations between Italy and Ethiopia reached a critical stage late in 1934 (see 1934 YEAR BOOK, p. 219) and early in 1935 after a series of encounters between their garrisons stationed along the undefined frontier between Ethiopia and Italian Somaliland. Both governments sent protests to the League of Nations at Geneva. The government of Ethiopia charged the Italians with "aggression in the territory," while Rome sent a blunt denial of the Ethiopian charges, and asserted that the border incidents had been provoked by actions of the Ethiopian troops. See ETHIOPIA under *History*.

On Jan. 3, 1935, an appeal was made by Ethiopia to the League of Nations asking it to take action under Article XI of the Covenant to safeguard peace between Ethiopia and Italy. This article authorizes the League to take action in case of a threat of war, and gives to each member the "friendly right" to bring threats to the League's attention. The message from the Foreign Minister of Ethiopia complained of new Italian acts of aggression at Gerlogubi. While some fear was felt that the border incidents would put the League to a sharp test, there was also feeling that the political agreement of Jan. 7, 1935, between Italy and France would help to smooth over the situation. See FRANCE and ITALY under *History*.

Ethiopia requested the Council of the League to consider its dispute with Italy at the extraordinary session that was to open on April 15. The council, after hearing the representatives of the two parties, who gave assurance of the peaceful intentions of their governments and of their desire to settle the dispute in conformity with the provisions of the Treaty of 1928, took the view that this question should not be placed on the agenda of the extraordinary session, seeing that it would appear on that of the ordinary session in May.

On May 25, the Council brought to a conclusion five days of grave tension. Premier Benito Mussolini yielded to the will of the League on vital points relative to the Italo-Ethiopian trouble and so postponed actual war to the autumn. A sword-in-hand speech by Il Duce only a matter of hours after his submission to the League showed the situation still to be dangerous, but the members of the Council exercised energy and courage in dealing with Mussolini's intransigence from May 20 to 25 and so for the time being brought the dispute under control of the League, with Mussolini's official consent.

The Council adopted resolutions on the subject. In the first, the Council observed that, direct negotiations having failed, the parties had appointed their arbitrators in accordance with Article 5 of the Italo-Ethiopian Treaty of Aug. 2, 1928; that they agreed to entrust to these arbitrators the settlement of the incidents that had occurred on the Italo-Ethiopian frontier; that the Italian Government no longer objected to the nationality

of the arbitrators appointed by the Ethiopian Government; and that the two Governments agreed in fixing Aug. 25, 1935, as the date on which the conciliation and arbitration procedure shall have finished. In the second resolution, the Council, while leaving the parties free to settle the dispute in conformity with Article 5 of the Treaty, decided to meet (a) if, in the absence of an agreement terminating the dispute, no understanding had been reached before July 25 between the four arbitrators as to the choice of the fifth arbitrator; (b) if a settlement by conciliation and arbitration had not been reached by August 25.

On July 19 the Secretary-General received a communication from the Ethiopian Government which observed with regret that the Italian Government was still sending troops and war material to Africa. The former government protested against the publication in the Italian press of information concerning frontier incidents, with the purpose of disturbing the good relations between the two countries. In order to prove its pacific intentions, the Ethiopian Government suggested that the Council should send neutral observers to Ethiopia to inspect the districts bordering on Italian Somaliland and the other colonies, to make an investigation into the incidents, actual or alleged, and to report to the Council.

Failure of Arbitration and Conciliation. Meanwhile the Arbitration Commission proved unable to come to a conclusion. The agent of the Ethiopian Government contended that the question of whether Ualual was Ethiopian or Italian territory must be considered in connection with establishing responsibility for the Ualual incident. The agent of the Italian Government objected to this view. The arbitrators appointed by the Italian Government were of the opinion that this question was excluded from the terms of the arbitration agreement, and therefore was not within the jurisdiction of the Commission. The arbitrators nominated by the Ethiopian Government maintained that the Commission would be surrendering its independence were it to forbid the agent of the Ethiopian Government to state the reasons which led him to consider the Commission free to judge all the relevant circumstances of the incident, notably the question of the ownership of Ualual.

Following these divergencies of opinion, the two arbitrators appointed by the Ethiopian Government considered that the time had come for the selection of a fifth arbitrator in accordance with the Council resolution of May 25. The Italian Government proposed to the Ethiopian Government that the work of the Commission should be resumed within the limits of the arbitration agreement, which in its view excluded the question of frontiers. Ethiopia denied ever having agreed to any restriction of the powers of the Arbitration Commission, and asked that the Council be convened to interpret its terms of reference. In these circumstances, and in conformity with its resolution of May 25, the Council met in extraordinary session on July 31.

At the opening of the session the Italian representative, Baron Aloisi, drew attention to the Italian telegram of July 27 to the Secretary-General, in which it was declared that "should the Ethiopian Government make its intentions officially known, the Italian Government would have no difficulty in taking part in the extraordinary session of the Council, of which the only object must be that of considering the most suit-

able methods of enabling the Commission of Conciliation and Arbitration to resume its work."

The representative of Ethiopia, M. Jeze, explained that Ethiopia had asked the Council of the League of Nations to meet, when it had been proved at Scheveningen, on July 9, that the arbitral procedure which had been begun had no chance of succeeding, because the conditions in which the agreement of May 25 had been drawn up could not be fulfilled owing to the attitude of Italy. That is why, on July 9, the Secretariat of the League had received a request that the Council should be summoned with all urgency in order that it might intervene.

The Ethiopian representative further suggested that for the moment it might be desirable merely to note that Ethiopia had appealed to the League in order that this problem, which had been before the Council since January, 1935, might be finally settled. The Ethiopian Government was determined to do all it could to reach a peaceful solution.

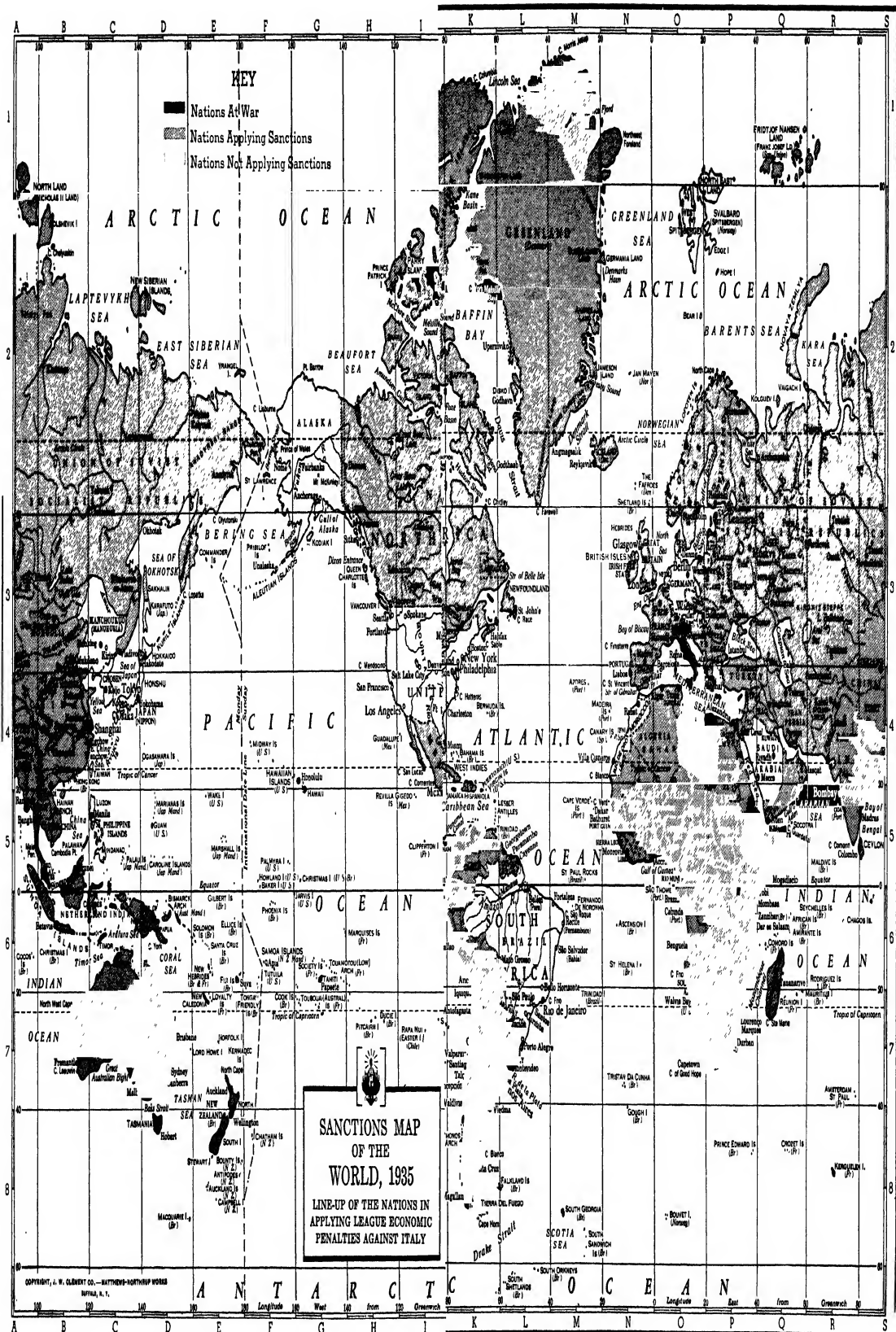
Baron Aloisi, the Italian representative, said that with regard to the statements of the Ethiopian representative, whereby he attributed to the Italian Government the responsibility for the failure of the work at Scheveningen, he must make full reservations. Britain's spokesman, Capt. Anthony Eden, said that it must first be made clear whether their work was limited in the sense which the President had suggested, or whether the Council could extend its agenda.

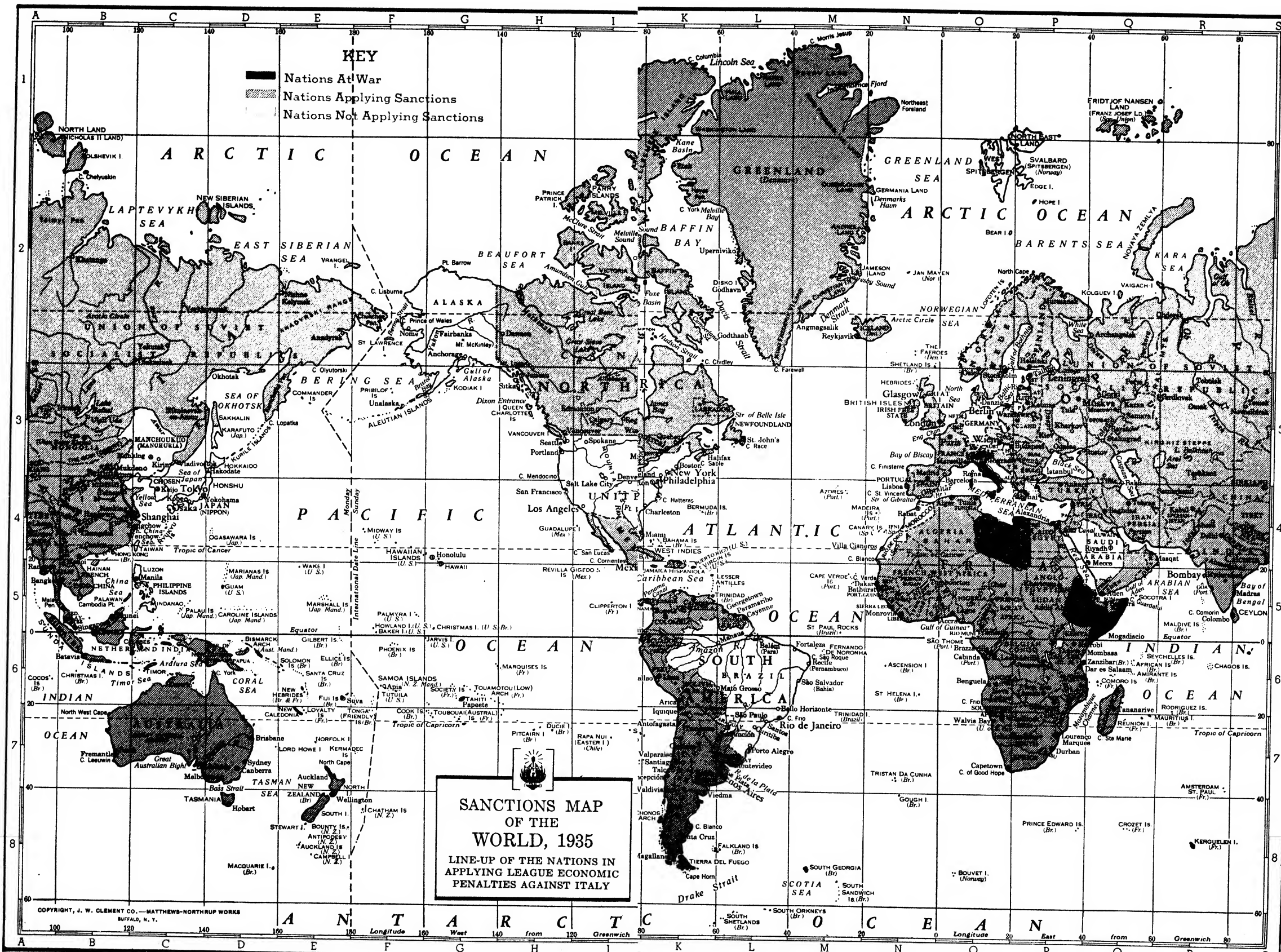
Premier Laval of France pointed out that the Council, by its resolution of May, did not otherwise define what its attitude would be in the event of an interruption of the conciliation and arbitration procedure. The Italian representative had asked the Council to limit its consideration to the Ualual incidents, while the Ethiopian representative had not asked for an extension of the discussion or for any different interpretation of the resolution. M. Laval therefore proposed that the Council should adjourn, to enable the representatives of the United Kingdom and France, who were particularly interested in the matter, to endeavor to find a formula enabling the Council to give full effect to its resolution.

The Ethiopian representative replied that M. Laval's statement did not entirely coincide with the Ethiopian view in regard to the interpretation of Ethiopia's appeal to the League Council. There seemed to be an impression that:

The Ethiopian Government expressed the view that the question should be limited to the mere subject of procedure. That is not the case. There are two questions, or rather one question with two aspects. On the one hand there is arbitration, and on the other there is everything that is connected with arbitration. There is the question of the Italian Government's general attitude which, as the Ethiopian Government believes it is in a position to show, has had the effect of preventing a solution by arbitration. Accordingly, the problem with which you are confronted is the problem of deciding whether this procedure is to be a dilatory procedure or a procedure aiming seriously at a settlement of the dispute between Ethiopia and Italy. The problem goes further than the appointment of a fifth arbitrator or the question of what is to happen in the event of the arbitrators failing to agree upon the appointment of the fifth arbitrator. The point is whether it is desired to continue to follow procedures which have so far yielded no result except that of aggravating a conflict which is every day becoming more critical, or whether, on the contrary, the Council desires to take a decision to consider the situation as a whole with a view to ascertaining whether there is a possibility—and I may say at once that the Ethiopian Government will cooperate in that effort—of finding a pacific solution.

With this reservation, and with apologies for any misunderstanding to which my first statement may have given rise, I support M. Laval's proposal to proceed to negotiations with a view to finding a formula.





KEY

- Nations At War
- Nations Applying Sanctions
- Nations Not Applying Sanctions

SANCTIONS MAP OF THE WORLD, 1935
LINE-UP OF THE NATIONS IN APPLYING LEAGUE ECONOMIC PENALTIES AGAINST ITALY

A B C D E F G H I J K L M N O P Q R S
Longitude from Greenwich
100 120 140 160 180 200 220 240 260 280 300 320 340 360

The Italian Representative declared that:

A form of conciliation and arbitration procedure exists to which the dispute has been submitted in accordance with the agreement reached between the two parties. The Council, in its resolution of May 25, 1935, noted the existence of this agreement and the opening of the procedure. The procedure has been suspended, a difference having arisen between the agents of the two Governments in regard to the interpretation of the arbitration agreement.

The Italian Government attaches the utmost importance to the success of that procedure, which, in its view, must determine who was the aggressor at Ualual on Dec. 5, 1934. The aggression at Ualual was the origin of the present situation.

The Italian Government expects that, in the first instance, all possible light will be thrown on the events at Ualual, which involve very grave responsibilities. Accordingly, the Italian Government cannot as matters stand enter into a discussion on a wider basis, an essential element of which must in any case be information as to the conclusions of the Conciliation and Arbitration Commission. Moreover, the Italian Government desires to recall that, under the terms of the Covenant, the Council cannot proceed to an examination of the dispute, since the latter is at the moment submitted to arbitral procedure. The Council has always conformed to this rule. In view of existing precedents, the Italian delegation has not even contemplated the possibility of a wider discussion, and could not therefore take part in any such discussion in the course of the present session.

I repeat that I am ready, in conjunction with the other members of the Council, to consider the most appropriate means of enabling the Conciliation and Arbitration Commission to resume its work and bring it to a successful issue.

On these grounds, I agree with M. Laval's suggestions.

The United Kingdom representative wished it to be clear that there was no question of the decision taken in regard to procedure limiting the agenda for the present session of the Council. The Council adjourned till August 3, to enable members, and especially those representing countries particularly interested in the matter, to endeavor to find a formula of agreement. On August 3 the Council met again and adopted the two following resolutions submitted to it by the President:

RESOLUTION No. 1

Referring to its resolutions of May 25, 1935, concerning the settlement of the dispute which has arisen between the Italian Government and the Ethiopian Government in consequence of the Ualual incident, which settlement was to be effected by the method specified in Article 5 of the Italo-Ethiopian Treaty of Aug. 2, 1928;

Whereas the proceedings of the Commission of Conciliation and Arbitration have been interrupted and, in order to ensure their resumption, the two Governments concerned have applied to the Council to interpret the agreement reached between those two Governments with regard to the exact scope of the task entrusted to that Commission;

Without offering any opinion on the attitude of the agents of the two Governments before that Commission or the views expressed by the members of the Commission itself;

Considering that the competence of the Commission rests upon the agreement reached between the parties to the dispute;

Considering that it appears both from the notes of May 15 and 16, 1935, and from the declarations made before the Council at its meeting on May 25 that the two parties did not agree that the Commission should examine frontier questions or give a legal interpretation of the agreements and treaties concerning the frontier, and that this matter therefore does not fall within the province of the Commission;

Considering, in consequence, that the Commission must not, by its decision on the Ualual incident, prejudice the solution of questions which do not fall within its province, and that it would be prejudging that solution if it founded its decision on the opinion that the place at which the incident occurred is under the sovereignty either of Italy or Ethiopia;

Declares that—while it is always open to the Commission to take into consideration, without entering upon any discussion on the matter, the conviction that was held by the local authorities on either side as to the sovereignty over the place of the incident—it is clear from the foregoing considerations that the Commission has not to take into account the circumstance that Ualual is under the sovereignty of one or other of the two parties, but must concern itself solely with the other elements in the dispute relating to the Ualual incident;

Takes note that the representatives of the two parties

have declared that they intend to pursue the procedure of conciliation and arbitration under the conditions laid down in Article 5 of the Treaty of 1928;

Takes note of the declaration of the two parties to the effect that the four members of the Commission of Conciliation and Arbitration will proceed without delay to designate the fifth arbitrator whose appointment might be necessary for the carrying through of their work;

Confident that the procedure will have brought about the settlement of the dispute before Sept. 1, 1935, invites the two Governments to inform it of the result not later than Sept. 4, 1935.

RESOLUTION No. 2

The Council decides to meet in any event on Sept. 4, 1935, to undertake the general examination, in its various aspects, of the relations between Italy and Ethiopia.

The representative of Ethiopia declared that for political reasons of expediency his government was called upon to make a considerable sacrifice in the interests of world peace. It wished once again to give the Council proof of its loyalty and good faith. He continued:

The Ethiopian Government is firmly convinced that, even after this sacrifice, which weakens its position before the arbitrators by the abandonment of a very important part of its case, impartial arbitrators under the chairmanship of a fifth arbitrator enjoying world-wide prestige will recognize the justice of the Ethiopian cause. The Imperial Ethiopian Government declares to the world, here and now, that it will unreservedly accept the decision of the arbitrators and will loyally abide by it.

The Ethiopian Government hails with joy and gratitude the Council's decision to meet in any case on Sept. 4, 1935, to undertake a general examination of Italo-Ethiopian relations in all their aspects. It entertains the firm hope that this full and general examination will enable the Council to establish once and for all, and on a solid basis, permanent friendly and trustful relations between Ethiopia and Italy.

Baron Aloisi said that the Italian delegation accepted the first resolution proposed to the Council. As regards the second, which fixed a date for the examination of the relations between Italy and Ethiopia in their various aspects, he would abstain from voting. The reasons for this abstention were clearly shown in the statements which he had made at the meeting of July 31, 1935. M. Laval said that the Council had accomplished its immediate task, but that the situation remained serious.

In its first resolution of August 3, the Council expressed confidence that the procedure of conciliation and arbitration entered upon in conformity with Article 5 of the Italo-Ethiopian Treaty of Aug. 2, 1928, would have brought about a settlement of the dispute between Italy and Ethiopia before September 1.

In accordance with this resolution, the Committee of Conciliation and Arbitration, which on July 9 had suspended its work, resumed it on August 20. It unanimously appointed M. Politis, Minister of Greece in Paris, as a fifth arbitrator. After hearing a statement by the Agent of the Ethiopian Government, the Commission moved to Berne and on August 23-25 received the evidence of a number of persons who had been called as witnesses by the Italian Government.

The Committee came back to Paris on August 26 and began to discuss the questions before it. The four arbitrators were unable to agree either on the facts of the Ualual incident or on the responsibilities arising therefrom. The intervention of the fifth arbitrator thus became necessary, and he was called in on August 29. Having noted the general contents of the dossier, the fifth arbitrator proceeded to discuss, in conjunction with the other members of the Commission, the pleadings of each side on the questions in dispute, and as a result, the Commission, on September 3, arrived unanimously at the following decision as regards the Ualual incident itself and the subsequent events:

That neither the Italian Government nor its agents on the spot can be held responsible in any way for the actual Ualual incident; the allegations brought against them by the Ethiopian Government are disproved in particular by the many precautions taken by them to prevent any incident on the occasion of the assembling at Ualual of Ethiopian regular and irregular troops, and also by the absence of any interest on their part in provoking the engagement of December 5; and

That although the Ethiopian Government also had no reasonable interest in provoking that engagement, its local authorities, by their attitude and particularly by the concentration and maintenance, after the departure of the Anglo-Ethiopian Commission, of numerous troops in the proximity of the Italian line at Ualual, may have given the impression that they had aggressive intentions—which would seem to render the Italian version plausible—but that nevertheless it had not been shown that they can be held responsible for the actual incident of December 5.

From Dec. 6, 1934, to May 25, 1935, various incidents occurred between the Italian and Ethiopian forces, some following upon the Ualual incident, and others unconnected with it.

A careful examination of the facts alleged, on both sides shows that of these incidents, the first-named, which followed upon the Ualual incident, were of an accidental character, while the others were for the most part not serious and of very ordinary occurrence in the region in which they took place.

In these circumstances, the Commission is of opinion that in respect of these minor incidents no international responsibility need be involved.

The Arbitration Commission's award was immediately communicated by the Italian and Ethiopian representatives to the Secretary-General of the League. In accordance with the second resolution of August 3, the Council of the League met on September 4 "to undertake the general examination, in its various aspects of the relations between Italy and Ethiopia."

On the motion of the President, the Council (the Italian representative having announced that he abstained) set up a Committee consisting of the representatives of the United Kingdom, Spain, France, Poland, and Turkey, to examine as a whole the relations between Italy and Ethiopia with a view to seeking a peaceful solution. The Committee of Five that had thus been set up, after appointing M. de Madariaga (Spain) as chairman, pointed out at once to the parties that "conscious of its responsibilities for seeking a peaceful settlement of the dispute, it relied upon the governments concerned to see that nothing was done which might disturb or endanger its work."

The Ethiopian delegation replied that "nobody could appreciate the Committee's recommendation more highly than that delegation." The Committee then set up a sub-committee, under the chairmanship of M. Lopez Olivan, to study the documentary material furnished by the two governments and to submit to it the results of that study. The Committee of Five, after examining the two sets of documents, decided to abstain from any criticism. As an organ of conciliation, it was not called upon to deliver judgment, but to consider the situation and to seek to devise means of remedying it.

The Committee observed that Ethiopia, in conformity with her rights under the Covenant, was asking the League for international assistance. After M. Jeze's declaration in the Council, the first delegate of Ethiopia had in fact declared in the Assembly on September 11, that "any suggestion for improving the economic, financial, and political condition of Ethiopia would be welcomed," provided that it came from the League and was carried out in accordance with the spirit of the Covenant. This international assistance, in the Committee's view, seemed to offer a solution acceptable to both parties. The independence and territorial integrity of Ethiopia would be respect-

ed. Italy would have the possibility of resuming relations with Ethiopia based on good understanding and confident collaboration.

The Council received the report of the Committee of Five on September 26. The President, M. Ruiz Guinazu, observed that the efforts of the Committee of Five to find a peaceful settlement had been unsuccessful. But he was unwilling to believe that the path of conciliation was finally closed, and thought it wiser not to announce that the task of the Committee was at an end. It should be in a position, should any suggestions be made to it, to consider whether they might justify a further attempt at conciliation.

The President referred to the fact that the moment had come for the Council to contemplate the preparation of its report in virtue of Article XV of the Covenant. The unanimous award of the arbitrators, in conformity with the Italo-Ethiopian Treaty of 1928, had not put an end to the dispute brought before the Council. On September 4, Article XV of the Covenant, therefore, became applicable. The President proposed to entrust to a Committee consisting of representatives of all the members of the Council, except the parties, the drafting of the report referred to in Article XV, paragraph 4. He suggested that the Council session should not be closed.

The Council Committee met on September 27 and appointed M. de Madariaga as chairman. It noted a telegram from the Emperor of Ethiopia announcing that, several months ago, the Ethiopian troops had received the order to withdraw 30 kilometers from the frontier to avoid any incident. At the same time the telegram asked for the dispatch of impartial observers to note the facts in regard to any aggression or incident that might occur and decide who was responsible for them. The Committee decided to consider whether the state of affairs would enable impartial observers to carry out their duty.

On September 28, in a further telegram, the Emperor of Ethiopia announced that while continuing to collaborate with the Council for a pacific settlement in accordance with the Covenant, he would be failing in his duty if he delayed any longer the general mobilization necessary to ensure the defense of his country. The telegram added that the contemplated mobilization would not affect previous orders to keep Ethiopian troops at a distance from the frontier.

Application of Sanctions. During the month of October the Italo-Ethiopian dispute again called for the urgent attention of the Council and of the Assembly. On October 2 the Emperor of Ethiopia informed the Council that Italian troops had violated the Ethiopian frontier to the south of Mount Mussa Ali near French Somaliland. On the following day the Italian Government replied that the warlike and aggressive spirit in Ethiopia had succeeded in imposing war against Italy, and that the Italian Government had been obliged to authorize the high command in Eritrea to take the necessary measures of defense. The same day the Ethiopian Government informed the Council that Italian military aeroplanes had bombarded Adowa and Adigrat, that a battle was taking place in the province of Agame, and that these events occurring on Ethiopian territory involved a violation of the Covenant by Italian aggression.

Thereupon a Committee consisting of representatives of all members of the Council except the parties drew up the report referred to in paragraph 4 of Article XV of the Covenant and recommend-

ed that any violation of the Covenant should be brought to an end. On October 5 the Council, after hearing the parties, instructed a Committee of Six to examine the situation. This Committee reached the conclusion that the Italian Government had resorted to war in disregard of its obligations under Article XII of the Covenant, which conclusion the Council adopted on October 7.

The Assembly, which had adjourned on September 28, met again on October 9. The delegates of 50 States out of 54 countries represented in the Assembly agreed with the Council that Italy had had recourse to war contrary to her engagements under the Covenant. Having regard to the obligations incumbent on Members of the League under Article XVI, and the desirability of coordinating the measures which each proposed to take, the Assembly decided to set up a Committee consisting of one delegate for each state, with the exception of the parties; it then again adjourned.

After Italy was found guilty by the League Council in making war in violation of the Covenant and 50 nations of the Assembly had agreed to apply economic sanctions, a committee of all League countries, except Italy and Ethiopia, was set up. Called the Coördination Committee, it decided what sanctions should be applied, and how. Fifty-two nations took part in the work of this Committee, including Austria, Hungary, and Albania, which, however, would not agree to participate in sanctions. Eighteen of these countries were named as a bureau or steering committee for the larger body; it was known as the Committee of Eighteen. After adopting five specific proposals for economic sanctions, the Coördination Committee recessed until October 31, while the Committee of Eighteen remained in session. The five proposals were:

- (1) Placing an embargo on sale of arms and ammunition to Italy and lifting existing embargoes against Ethiopia.
- (2) Discontinuance of loans and bank credits for Italy.
- (3) Forbidding purchase or importation of any goods from Italy.
- (4) Forbidding exportation of certain war materials, chief supplies of which are controlled by the 50 League countries that have agreed to apply sanctions.
- (5) Providing for mutual support in trade readjustment during the application of sanctions in an effort to prevent any country from suffering unendurable losses.

Nations of the League were urged to put the first two proposals into effect as soon as possible after their adoption. It was agreed that each government would notify Geneva not later than October 28, when it could put into effect proposals three and four. The plan was for all participants to make these operative simultaneously.

There are three things of significance to be noted in connection with this programme. (1) It covers all of the specifications for economic sanctions in Covenant Article XVI, except where refusal of non-League countries to participate would defeat export embargo measures and where there were humanitarian considerations. (2) On the humanitarian score, no embargo was proposed on exports of foodstuffs to Italy, so that it could not be said that sanctions were directed against the civilian population. (3) No proposals were made for military measures. There was authority for these, but they were not made mandatory by Article XVI, as were economic sanctions.

The *League of Nations Chronicle* described these proposals as follows:

Proposal No. 1 is self-explanatory. As far as it concerns Italy, it is of no great importance, since the Italians can manufacture all of the arms and ammunition they need. But lifting embargoes on sale of arms and ammunition for Ethiopia is already proving of help to the Ethiopians in

defense of their country. They had been able to buy almost no arms until sanctions were applied; now it is said the Emperor is beginning to equip his army.

Proposal No. 2, forbidding loans and bank credits, is of small practical consequence. Italy's financial condition has been such that its credit was exhausted before invasion of Ethiopia was started. Most goods exported to Italy for some time have been sold on a cash basis.

Proposal No. 3 is probably the most important of the five measures so far agreed upon. It was the one about which there was the most hesitancy. The idea of the British, who sponsored the proposal, was that if the other countries stopped buying of Italy, the Italians would have no exchange with which to pay for exports of raw material required for prosecuting war. It would then be necessary to pay in gold; and Italy's gold supply is running low. Also, it was argued, it would help sanction-imposing nations by making it possible for them to buy of each other things they have been importing from Italy.

Switzerland, in particular, hesitated about this sanction, making a reservation on its account in the Coördination Committee. The Swiss import a great deal from Italy, and feel that suddenly to stop would badly disorganize their trade system. Moreover, if sanctions are long continued, Proposal No. 3 will have the effect of making Proposal No. 4 much more drastic than it could be otherwise. That is, if all imports from Italy are cut off it will ultimately be impossible for the Italians to buy of other countries those things that are not on the embargo list.

Probably, it was this very fact that the British had in mind in pushing for the import boycott. And it is indicative of the serious purpose of 50 countries to make sanctions work that the Proposal was finally adopted.

Proposal No. 4, forbidding export to Italy of certain raw materials, falls short of potency it could have were Germany and the United States cooperating in its application.

Nothing would be gained by the League countries refusing to sell to Italy war materials that the Italians would have no trouble in buying elsewhere. For instance, there would be no point in nations of the League stopping export of cotton that could be bought in quantities to supply all Italian demands from the United States. To refuse to sell the Italians coal that they could get from Germany would achieve nothing beyond financial loss for countries imposing sanctions.

Consequently, the League embargo list includes only such war materials as can not be secured in adequate quantities from non-League countries. The list can be expanded should the United States, Germany, and possibly Japan decide to cooperate. As it stands now it includes:

- (A) Horses, mules, donkeys, camels, and all other transport animals.
- (B) Rubber.
- (C) Bauxite, aluminum, alumina (aluminum oxide), iron ore, scrap iron.

Chromium, manganese, nickel, titanium, tungsten, vanadium and their ores, and ferro-alloys (and also ferromolybdenum, ferro-silicon-manganese and ferro-silicon-manganese-aluminum).

Tin and tin ore; also all crude forms of the minerals and metals mentioned and their ores, scrap and alloys.

Proposal No. 5 is essential to the success of the entire economic sanctions programme. Without some mutual support arrangement, faithful execution of sanctions would come near being disastrous to some of the smaller countries, through their loss of trade with Italy. And the sacrifices entailed, even for the countries that could meet them without disaster, would be unevenly, and hence unfairly, distributed.

Different schemes for financial compensation of smaller countries suffering heavy losses because of sanctions were considered and rejected as impracticable. Instead, experts are working on the idea of turning the purchases normally made from Italy to those countries which suffer most on account of the export embargo.

The League moved forward in its preparation for the application of sanctions against Italy. The first of the various sub-committees set up by the Assembly Coördinating Committee to finish its task was the sub-committee of jurists, which, after examining the constitutional difficulties in the way of applying the League's decisions, presented the following resolution, which the Assembly Coördinating Committee adopted on October 16:

The Committee of Coördination, considering that it has met to ensure rapid and effective application of the measures which have been and may subsequently be proposed by the committee; considering that it rests with each country to apply these measures in accordance with its public law and in particular the powers of its government in regard to the execution of treaties; calls attention to the fact that members of the League, being bound by the obligations which flow from Article XVI of the Covenant, are under a duty to take necessary steps to enable them to carry out these obligations with all requisite rapidity.

The Coördinating Committee also adopted at the same time a report of the sub-committee of military experts on the arms embargo which had made some changes in the list of articles considered as "arms, ammunition, and implements of war."

Egypt notified the League on October 31 that "The Egyptian Government has decided in principle to adhere to the application of economic and financial sanctions in connection with the Italo-Ethiopian conflict and execute within the limits of possibility such measures as may be decided upon by the League of Nations." In his reply in behalf of the United States, Secretary of State Hull recounted first the measures already taken by this country and concluded as follows:

The course thus pursued in advance of action by other governments, most of which are parties to one or more of the peace pacts to which I have referred, represents the independent and affirmative policy of the government of the United States and indicates its purpose not to be drawn into the war and its desire not to contribute to a prolongation of the war. Realizing that war adversely affects every country, that it may seriously endanger the economic welfare of each and that it causes untold human misery and even threatens the existence of civilization, the United States, in keeping with the letter and spirit of the Pact of Paris and other peace obligations, undertakes at all times to not only exercise its moral influence in favor of peace throughout the world, but to contribute in every practicable way within the limitations of our foreign policy to that end. It views with sympathetic interest the individual or concerted efforts of other nations to preserve peace or to localize and shorten the duration of war.

During the month of November, the dispute between Italy and Ethiopia was still the main preoccupation of the League. The Committee appointed to draft measures in application of Article XVI of the Covenant took several decisions with a view to completing and tightening up the sanctions system. A committee of experts was instructed to give assistance to the chairman of the Committee of Eighteen in supervising the measures agreed on. In the Coordination Committee, stress was laid by the various representatives on the necessity that, at the same time as sanctions were being applied, the League should continue to make every effort at conciliation with a view to restoring peace. They emphasized that the spirit of the Covenant required of all that they should endeavor to secure within the framework of the League a fair and friendly settlement of the dispute.

On November 2 the Assembly Coördinating Committee set November 18 as the date for application of sanctions against Italy. In a speech to the Committee Premier Laval reminded the nations that they had another duty to perform—the duty "to seek as rapidly as possible for a friendly settlement of the dispute." Both M. Laval and Sir Samuel Hoare, who addressed the Committee, referred to the efforts their governments had made to this end and declared their intention to continue to strive "for a speedy and honorable settlement . . . acceptable to all three parties of the controversy—the League of Nations, Ethiopia, and Italy."

During the Committee's discussion of the sanctions question, Dr. Walter A. Riddell, Canadian delegate, proposed that petroleum, coal, iron, and steel be added to the list of raw materials banned for export to Italy. On November 4 the Committee's sub-committee of 18 adopted this suggestion "in principle" with the proviso that the plan would not come into force "until conditions for rendering it effective appear to be realized"—which was understood to mean that such an embargo could not be effective unless Germany and the United States cooperated with the League members.

A note of protest against the application of

sanctions against her was addressed by Italy to all countries members of the League of Nations and copies of the note were also delivered to non-League members for their information. Declaring that Italy's side of the question had not been given sufficient consideration before the League decided upon the coercive measures, the note went on to say that Italy's charge of the existence of slavery in Ethiopia had been corroborated by the religious authorities of the communities in northern Ethiopia occupied by the Italian army and that the League ought to take these facts into consideration. The sanctions, said the note, had been hastily voted by the Coordination Committee "which is not by any means an organ of the League" and therefore "the various governments remain individually the judges and are responsible to Italy both as regards the scope of the measures they adopt and as regards their legal justification."

The arms embargo, according to Italy's note, "far from facilitating a termination of the conflict and promoting a settlement thereof in the spirit of the Covenant, adds to its gravity and threatens to prolong its duration." Sanctions had not been provided in previous conflicts of a more serious nature, the note went on to say, and their application against Italy under "conditions which the Italian Government and people regard as unjust and arbitrary" must therefore be opposed by Italy in the most determined manner. Calling attention to the adverse effect application of the coercive measures will have on the economic system of the world, the note declares that should the nations persist in their declared intention, Italy will be justified in taking counter-measures. The possibility of Italy's withdrawal from the League is broached in the final section of the note which closes with a request for the governments involved to inform the Italian Government in what way they intend "in their free and sovereign character to conduct themselves in view of the restrictive measures proposed against Italy."

With the actual application of economic sanctions on November 18, began the third of four crucial tests of the League of Nations procedure for stopping war by non-military means. First, was the test of whether the nations could and would collectively pass judgment on one of their number at the beginning of an armed conflict for making war illegally. Second, was the test of whether, in face of the grave risks and great sacrifices involved, the nations would undertake application of economic sanctions to stop the war. Third, was the test now beginning of whether the nations would carry through with the sanctions programme that had been undertaken. Of course the supreme test was whether, especially in view of the weakening effect of countries outside the League, economic sanctions would have the efficacy to stop aggression.

When the League Council convened on the Italo-Ethiopian dispute two and a half months before the application of sanctions few persons had the temerity to predict that, at this time, any one of these tests could be met successfully. Within a few days after Italy invaded Ethiopia the League Council declared Italy guilty of making war illegally. Without hitch or hesitancy the first test was passed and then followed the other steps with surprising rapidity.

The League Assembly Coördinating Committee's sub-committee of Eighteen was called December 12 to discuss the proposal that petroleum, coal, iron, and steel be added to the list of prod-



Wide World

THE LEAGUE COUNCIL DISCUSSING SANCTIONS AGAINST ITALY

Among those shown at the Council table are Pierre Laval (France), Anthony Eden (Britain), Baron Aloisi (Italy), Maxim Litvinov (U.S.S.R.), and Salvador de Madariaga (Spain)



Wide World

THE STRESA CONFERENCE

Left to right: Foreign Minister Pierre Laval, France; Premier Benito Mussolini, Italy; Prime Minister J. Ramsay MacDonald, Great Britain, and Premier Pierre-Etienne Flandin, France

EUROPE



PIERRE LAVAL
Premier of France, appointed June 7, 1935



© International
DR. EDUARD BENEŠ
President of Czechoslovakia, elected Dec 18, 1935



Acme
TH. A. M. STAUNING
Premier of Denmark, reelected Oct 22, 1935



Wide World
MARJAN ZYNDRAM KOSCIALKOWSKI
Premier of Poland, appointed Oct 13, 1935



Acme
DR. MILAN STOYADINOVITCH
Premier of Yugoslavia, appointed June 24, 1935



Wide World
GEORGE II
King of Greece, restored to throne Nov 25, 1935

EUROPEAN POLITICAL FIGURES

ucts barred from export to Italy. The attitude of the United States Government toward the shipment of raw materials to the belligerent countries was indicated in a statement issued by Secretary of State Hull on November 15 which read in part as follows:

The American people are entitled to know that there are certain commodities such as oil, copper, trucks, tractors, scrap iron, and scrap steel which are essential war materials although not actually arms, ammunition, or implements of war, and that according to recent government trade reports, a considerably increased amount of these is being exported for war purposes. This class of trade is directly contrary to the policy of this government as announced in official statements of the President and Secretary of State, as it is also contrary to the general spirit of the recent neutrality act.

The Committee of Experts appointed by the Committee of Eighteen, which had already met in November, held a second session in December and studied the replies sent in by Governments concerning the application of the Coordination Committee's proposals. Proposal I had been accepted by 52 governments, and 50 of these had notified its entry into force; Proposal II had been accepted by 52 governments (47 entries into force); Proposal IV by 51 (45), and Proposal V by 46 governments.

The Committee also made a study of the area covered by the measures taken by governments members of the League. It appears from this study that all colonies, protectorates, dependencies, and mandated territories of countries which have applied measures are covered by those measures, with the exception of the Spanish colonies, of Morocco (with reference to which conversations were to be initiated), and of Spitzbergen, which is ice-bound at this time of year. The Committee did not consider that it fell within its functions to review the situation in non-member states or the action which had been taken to draw their attention to the Coordination Committee's proposals. The Committee's report came before the Committee of laws and decrees which had been communicated by governments.

Hoare-Laval Peace Proposals. The Expert Committee's report came before the Committee of Eighteen on December 12. At the opening of the meeting the representatives of France and the United Kingdom, M. Laval and Mr. Eden, announced that in accordance with the hope expressed by the First Delegate of Belgium in the Coordination Committee their two governments, as the result of conversations between M. Laval and Sir Samuel Hoare in Paris on December 7 and 8, had made suggestions to the Italian and Ethiopian Governments for a friendly settlement of the dispute. They stated that these suggestions would shortly be communicated to the Council of the League.

As M. Laval said: "Our task will then be at an end, and it will be for the League itself to decide what is to be done." Mr. Eden said: "They are suggestions which it is hoped may make possible the beginning of negotiations. If the League does not agree with these suggestions, we shall make no complaint. . . . Any final settlement must be acceptable to the League as well as to the two parties in conflict." The Committee of Eighteen approved the Expert Committee's report, and decided to draw the attention of members of the League to the points set out in the last part of that document. But in view of the communications from the representatives of United Kingdom and French Governments, the Committee decided to await the development of the negotiations before proceeding with its work.

The Franco-British suggestions were communicated on December 13 to the members of the Council. In their covering letter to the Secretary-General, the two governments announced that in working out the bases of a settlement they had borne in mind the deliberations of the Committee of Five. They had reached an agreement, and on December 10 they had instructed their representatives at Rome and Addis Ababa to lay before the Italian and Ethiopian Governments certain suggestions, entitled "Outline of an Agreed Settlement of the Italo-Ethiopian Conflict." For these proposals, see ETHIOPIA, FRANCE, and GREAT BRITAIN under *History*.

On the same day, in a communication to the Secretary-General, the Ethiopian Government said that in the present circumstances it was its imperative duty to do nothing which could contribute towards creating a precedent prejudicial to any of the states members of the League. Before replying to the proposal submitted to it, the Ethiopian Government asked that the Assembly of the League be convened immediately. The President of the Assembly, Eduard Beneš (Czechoslovakia), was consulted. He held the view that, as the Council had been summoned to take cognizance of the Franco-British proposals, and as it remained, under the Covenant, the organ to which the dispute had been duly submitted, it was advisable to await the result of the Council's deliberations before taking a decision in regard to the Ethiopian request.

The Council met on December 18. Mr. Eden said that the Paris proposals had been put forward solely to ascertain the views of the two parties and of the League. If it transpired that these proposals did not satisfy the essential condition of agreement by the two parties and the League, His Majesty's Government could not continue to recommend or support them. The French representative, M. Laval, stated that as the parties had not yet made known their replies the Council would no doubt itself desire to avoid expressing a view. In his opinion even if this attempt were not approved by all parties concerned, the Council would not be relieved of the duty incumbent on it to neglect no means of attaining a just and honorable solution, as was required both by the interests of peace and by the true spirit of the League. M. Wolde Mariam (Ethiopia) declared that before replying to the Franco-British suggestions, Ethiopia would wish to know the views of members of the League. There was danger that a precedent would be created whose consequences would be incalculable. Ethiopia relied on the wisdom of the Council to safeguard the rights of all members of the League.

On December 19 the members of the Council other than the parties, after a discussion, decided to submit to the Council the following draft resolution, which was adopted:

1. The Council thanks the delegates of France and of the United Kingdom for the communication which they have made to it concerning the suggestions which they have put before the two Parties with a view to conciliation.
2. In view of the preliminary character of these suggestions, as emphasized by the two Powers which took the initiative of putting them forward, the Council does not consider that it is called upon to express an opinion in regard to them at present.
3. The Council instructs the Committee of Thirteen, bearing in mind the provisions of the Covenant, to examine the situation as a whole, as it may appear in the light of the information which the Committee may procure.

On the same day the Committee of Eighteen met and observed that it was in the same position after the Council's resolution as it had previously been.

It would therefore continue to follow the application of the sanctions in force, and accordingly instructed the chairman to remain in touch with the chairman of the Committee of Thirteen with a view to the fixing of the date of its next meeting.

LEATHER. The production of leather, other than furs, in the United States in 1935, according to the Trade Survey Bureau of the Tanners' Council of America, amounted to 122,846,000 hides and skins, as compared with 111,450,000 in 1934. By major types the production as compared with 1934 was:

LEATHER PRODUCTION
[000 omitted]

	1935	1934
All Cattle Hide Leather .....hides	21,995	19,771
Calf and Kid Leather .....skins	14,136	12,442
Goat and Kid Leather .....do.	48,250	44,982
Sheep and Lamb Leather .....do.	38,465	34,255

During the year, according to U.S. Department of Commerce reports, the imports of hides and skins other than furs into the United States amounted to 303,475,633 lb., valued at \$45,576,877 as against 200,765,917 lb., valued at \$35,259,249 in 1934; imports of leather were valued at \$8,186,049, and imports of leather manufactures, including footwear, gloves, bags, etc., were valued at \$7,820,724. In 1935, hides and skins exported amounted to 42,309,659 lb., valued at \$4,151,393, as compared with 52,076,133 lb., valued at \$4,304,276 in 1934. The value of leather exports amounted to \$17,254,885, and of leather manufactures, \$16,791,656.

LEBANON REPUBLIC. See SYRIA.

LEEWARD ISLANDS, BRITISH. A colony in the West Indies, politically divided into five presidencies (1) Antigua, with Barbuda and Redonda; (2) St. Christopher-Nevis, with Anguilla; (3) Dominica; (4) Montserrat; (5) British Virgin Islands, with Sombrero. Total area, 726 sq. miles; population (Jan. 1, 1935), 135,528. Chief towns: St. John's (the capital), 10,000 inhabitants; Basseterre, 8000; Roseau, 8000; Plymouth, 2000; Charlestown, 1200; Road Town, 400.

Production and Trade. Sugar, cotton, limes, bananas, avocado pears, bay oil, oranges, molasses, cacao, tobacco, rum, salt, and tomatoes were the main products. In 1934, imports were valued at \$578,067; exports, \$577,176 of which sugar (48,997 tons) accounted for \$456,534.

Government. For 1934, revenue amounted to £257,519; expenditure, £259,309; public debt, £94,500 against which the sinking fund was £56,061. A governor headed the central government which consisted of a Federal executive council and a Federal legislative council. The four larger presidencies also had separate executive and legislative councils; the Virgin Islands had an executive council. Sir Gordon Lethem was appointed, during 1935, to succeed Sir Reginald St. Johnston as Governor and Commander-in-Chief.

History. A severe earthquake occurred in Montserrat on May 6, 1935, and many buildings were damaged but no lives were lost.

LEEWARD ISLANDS, FRENCH. See OCEANIA, FRENCH ESTABLISHMENTS IN.

LEGAL EDUCATION. See LAW.

LEGISLATION. See AUTOMOBILES; BANKS AND BANKING; CHILD LABOR; LAW; RAILWAYS; REFERENDUM; UNITED STATES, and articles on the separate States.

LEHIGH UNIVERSITY. A nonsectarian institution for the higher education of men in Beth-

lehem, Pa., founded in 1866. The University is divided into a College of Arts and Science, a College of Business Administration, and a College of Engineering. The enrollment for the autumn of 1935 was 1535. The enrollment for the summer session of 1935 was 379. The faculty numbered 169, including 15 persons on the administration staff. The endowment amounted to \$5,352,070, and the total income for the year was \$977,841. There were 218,000 volumes in the library. President, Clement Clarence Williams, B.S. in C.E., LL.D., inaugurated Oct. 2, 1935.

LETICIA PROTOCOL. See COLOMBIA and PERU under History; PAN AMERICAN UNION.

LÉVI, là'vè', SYLVAIN. A French Orientalist, died in Paris, Oct. 31, 1935, where he was born, Mar. 28, 1863. Educated at the Lycée Charlemagne, the Faculté des Lettres, and the École des Hautes Études, he became interested in the Sanskrit language and letters, and through the influence of Bergaigne, his teacher, specialized in their study. He became a lecturer in the section of history and philology at the École des Hautes Études in 1886 and two years later lectured in the section devoted to religion and science. Upon the death of Bergaigne in 1889 he received the appointment of assistant professor at the Sorbonne, and in the following year he took the doctor's degree. In 1894 he succeeded Foucaux in the chair of Sanskrit at the Collège de France. From 1897 to 1898 he traveled extensively in Japan and India, at the behest of the French Ministry of Public Instruction, and in 1921 lectured at Tagore's University in Santiniketan, Bengal, India. Shortly afterward he took charge of the Franco-Japanese Institute at Tokyo.

A prominent historian and Orientalist, Dr. Lévi was particularly an authority on the religion and life of the Indians, and in 1935 he announced that about 2800 years before the Christian era, northern India had a culture of its own. An honorary member of the Royal Asiatic Society and the American Oriental Society, he was president of Société de Linguistique de Paris and Société des Études Juives, and a member of the Imperial Academy of Japan, the Russian Academy of Science, and the Belgian Royal Academy. Also, he was a knight of the French Legion of Honor.

His many works on Oriental subjects include *Le Théâtre indien*, a standard work (1890; 83d fascicule of La Bibliothèque de l'École des hautes études); *La Doctrine du sacrifice dans ces Brâhmanas* (1898); *Le Népal* (3 vols., 1905-08); *Literary History of Sanskrit Buddhism*, with Winternitz and Huber (1920); a translation and introduction to *La Légende de Nalac Damayanti* (1920); a preface and vocabulary for E. Chavannes' *Contes et Légendes du Bouddhisme Chinois* (1921); *Dans l'Inde* (1925); *L'Inde et le Monde* (1926), and *L'Inde* (1931). Also, he translated and edited *Mahâyâna Sûtrâlaṅkāra* (1907-11) and *Vṃśikā* and *Trīṃśikā* (1925-31), and contributed to *Revue Critique* and *La Grande Encyclopédie*, articles dealing with the literature and religion of India.

LIBERIA. A Negro republic on the west coast of Africa. Area, about 43,000 square miles; estimated population on Jan. 1, 1934, 2,500,000 (other estimates range as low as 1,000,000). Of the total population about 60,000 coast Negroes, including some 12,000 American-Liberians, may be considered as civilized. Capital, Monrovia (population, about 10,000). In 1932 there were 51 state schools and 121 mission schools, with a total attendance of

about 7000 pupils. Monrovia has a government college and a Methodist Episcopal college.

Production and Trade. Native coffee is the principal agricultural product. Production of rubber on the Firestone Plantation Company's extensive new plantations began in 1934, but in general the country's agricultural, forest, and mineral resources remain unexploited. Cacao, cotton, piassava fibre, palm oil, palm kernels, kola nuts, rice, and oil seeds are produced in small quantities. The natives collect beeswax. Imports in 1934 were valued at \$1,180,601 and exports at \$571,793. Imports from the United Kingdom in 1934 were \$409,294; from the United States, \$232,595 (\$388,168 in 1935). Exports to the United Kingdom were \$112,733; to the United States, \$39,088 (\$178,522 in 1935).

Finance. Budget receipts in 1934 totaled \$479,296; expenditures, \$468,808. The external bonded debt in 1934 amounted to \$2,192,000, on which interest and amortization charges were in arrears from July, 1931. The unsecured internal debt on Sept. 30, 1933, was \$600,000.

Communications. There are no railways and highways extended only 234 miles in 1935. The rivers are the main arteries of traffic. Native porters carry all goods in the interior. There is a government wireless station at Monrovia and cable communications with America and Europe, but there is no telephone or telegraph service.

Government. The Constitution, modeled on that of the United States, vests executive power in a president, assisted by a cabinet of 8 members, and legislative power in a legislature of two houses—a Senate of 10 members and a House of Representatives of 21. All branches of the government had been controlled continuously since 1878 by the True Whig party, which was dominated by a small group of descendants of American and West Indian slaves. Suffrage is restricted to Negroes owning land. English is the official language. President in 1935, Edwin Barclay, who assumed office in 1931.

History. In May, 1935, the Legislature passed a Constitutional Amendment extending the Presidential term from 4 to 8 years and then reelected President Barclay for the eight-year term commencing Jan. 6, 1936. The State Department at Washington on June 11, 1935, extended recognition to the Barclay régime, and on October 4 formal diplomatic relations were reestablished after a lapse of five years. On that date Lester A. Walton presented his credentials as U.S. Minister to President Barclay at Monrovia. The breach between the two countries was precipitated in 1931 by the reluctance of the Monrovia government to abolish slavery and forced labor. On June 17 C. McCaskey was appointed financial adviser to the Liberian Government. As a result of an agreement between the Liberian government and the only existing bank in the country the Bank of Monrovia, Inc., was opened on July 1, 1935. It took over the entire banking business of the country and functioned as the depository for the government.

LIBRARY ASSOCIATION, AMERICAN. The official organization of librarians in the United States and Canada, founded for the purpose of promoting library service and librarianship. In 1876 its membership was 103; in 1935 it was more than 12,300. The activities of the association are carried on by its officers; by more than 70 voluntary committees and boards, engaged in studying such problems as book buying, book selection, cataloguing, and library work with the blind and with the foreign-born; by hundreds of voluntary workers; and by

the members of the headquarters staff, which numbered approximately 60 in 1935.

The association issues various books and pamphlets for libraries and in the interest of library progress. Among the 1935 publications were: *Gifts for Children's Bookshelves*, a buying list for the parent and a reading list for the child; *One Thousand Books for the Senior High School Library*, a compilation by a joint committee of the American Library Association, National Education Association and National Council of Teachers of English; *Graded List of Books for Children*, a third edition prepared by a joint committee of the A.L.A., N.E.A., and N.C.T.E., which includes over 1600 books for grades 1-9, with buying information, descriptive note, and specific grades for each title; *Catalogers' and Classifiers' Yearbook No. 4*; *Buying List for Small Libraries*, a basic list of books; *Helps for Club Program Makers*, a list of subjects and source material; *Canadian Government Publications*, the first published checklist of Canadian documents; *Public Documents 1934*; *Guide to Reference Books, Sixth Edition*, by Isadore G. Mudge.

The association issues three periodicals: *Bulletin of the American Library Association*, a monthly which includes the annual reports, the conference proceedings, and the yearly handbook; *The Booklist*, published monthly as a guide to the selection and purchase of current books; and the *Subscription Books Bulletin*, a quarterly which presents critical estimates of subscription books and sets sold currently by canvassing agents.

The fifty-seventh annual conference of the association was held in Denver, Colorado, June 24-29, 1935, with more than 1500 librarians present. On this occasion, the John Newbery Medal, awarded annually by the section for library work with children for the most distinguished children's book of the year, was presented to Monica Shannon for her book, *Dobry*.

At the annual Midwinter Conference of the association held in Chicago Dec. 27-29, 1934, the council indorsed national and state planning, advocated federal aid in the form of an annual appropriation, approved the establishment of a federal library agency, registered a protest against tax limitation laws, and adopted minimum requirements for teacher-librarian training agencies.

During the Denver conference the council voted to defer negotiations looking toward permanent federal aid to libraries for a year until a special committee created by the council shall have given further study to the subject and reported at the next annual conference; to continue activities concerning state and national planning and support of the establishment of a federal library agency; and to express appreciation to the German government for reducing by 25 per cent the export prices of books and periodicals to libraries.

The officers for 1935-36, elected at the Denver Conference, were: Louis Round Wilson, Graduate Library School, University of Chicago, president; Franklin F. Hopper, New York Public Library, New York City, first vice president; Essae M. Culver, State Library Commission, Baton Rouge, Louisiana, second vice president; Matthew S. Dudgeon, Public Library, Milwaukee, treasurer. Headquarters of the association are at 520 North Michigan Avenue, Chicago.

LIBRARY ASSOCIATION, THE. An organization of libraries and librarians throughout the British commonwealth of nations, founded in 1877 and incorporated by Royal charter in 1898.

Its primary objects are: to unite all persons engaged or interested in library work by holding conferences and meetings for the discussion of bibliographical questions and matters affecting libraries; to promote the better administration of libraries; to promote whatever may tend to the improvement of the position and qualifications of librarians; and to hold examinations in librarianship, and to issue certificates of efficiency. It maintains a professional register of more than 1100 qualified persons, classified as Fellows (F.L.A.) and Associates (A.L.A.); candidates for senior positions in libraries are selected from amongst those who have been elected to fellowship or associateship. The school of librarianship at the University of London is conducted under the joint auspices of the university and of the association. Among the association's publications are: *The Library Association Record*; *The Library Assistant*; *The Library Association Year Book*; *The Year's Work in Librarianship*; and *The Subject Index to Periodicals*. The president elected for 1936 was Ernest A. Savage, F.L.A. The secretary is P. S. J. Welsford, F.I.S.A. Headquarters are at Chaucer House, Malet Place, London, W.C. 1.

LIBRARY PROGRESS. Reading needs of 45 million people in the United States who now lack library service was the chief concern of librarians and the American Library Association during 1935. In spite of a 100 per cent increase in public library use during the last 10 years, 45 million people are still without access to a local public library. More than 80 per cent of the rural population in the United States is without library service, compared with 12 per cent of the urban population.

During their 1935 legislative sessions, Illinois and Ohio recognized that the state as well as the local community has a definite part in building up an intelligent citizenship. Ohio made an emergency grant of \$100,000 and Illinois, \$600,000, for books to supplement the budgets of local public libraries which had been drastically reduced during the past four years.

Twelve states reported increased appropriations for state library agencies ranging from a few thousand dollars to more than 250 per cent. The states with increased revenue are Idaho, Iowa, Minnesota, Missouri, Nebraska, New Hampshire, Ohio, Oklahoma, Oregon, North Carolina, Texas, and Vermont.

Assistance in the form of labor from relief workers and funds for buildings and improvements continued to be received by libraries during the year.

The New York Public Library received a Works Progress Administration grant of \$2,500,000 and the Boston Public Library \$1,800,000. Public Works Administration allotments include \$685,787 for 13 new public library buildings as well as many grants to colleges for library buildings.

Adult Education. The A.L.A. Board on Library and Adult Education instituted studies on the relation of the library to such projects as public forums, community adult education, councils, recreational reading and study clubs, organized adult education, and recreation in newly established planned communities such as those in the Tennessee Valley Authority. This Board also issued a 10-year summary, *The Library and Adult Education*, covering accomplishments of 1924-34. The work on Readable Books continued to receive special attention, particularly in a project at Teachers College, Columbia University.

In addition to the adult education services offered by public libraries in over 60 cities, effective in-

formal reading programmes have been or are being instituted in many localities through the cooperation of libraries and the educational directors of Emergency Education Programme, Works Progress Administration, Civilian Conservation Corps, National Youth Administration, Federal Emergency Relief Administration, and others.

Many libraries are lending the Talking Book Records for the use of the adult blind. A list of Talking Books for the adult blind was compiled by librarians, and is available through the Library of Congress. During the year an appropriation of \$75,000 was made by Congress for the purchase and distribution of Talking Book Records and \$211,500 for the manufacture of 5000 Talking Book machines for the 120,000 adult blind.

Carnegie Centennial. Observances of the one-hundredth anniversary of the birth of Andrew Carnegie were held throughout the United States and the British Dominions. Carnegie's gifts to libraries amounted to approximately \$65,000,000 for establishment, endowment, or equipment of nearly 3000 libraries in all parts of the world. It is estimated that at least 35,000,000 people have been given access to free public library privileges through Carnegie buildings.

Certification. Legally required certification, designed to assure future appointment of only qualified personnel in tax-supported libraries, was endorsed by many state library associations and legislative committees, which were commissioned to draft bills for submission to state legislatures in 1936.

Circulation. According to A.L.A. reports of statistics received in 1934 there were 6235 free public libraries housing 100,470,215 volumes and circulating 449,998,845 volumes, as compared to 5954 free public libraries in 1926 with 65,561,796 volumes and a circulation of 226,142,926 volumes.

Coöperative Study of Secondary School Standards. Dr. Louis R. Wilson represented the library profession on the advisory committee to the Executive Committee of the Coöperative Study of Secondary School Standards at work on a nationwide study of standards, under a grant from the General Education Board.

Education for Librarianship. A 10-year review of professional training, *Education for Librarianship; the Last Decade and the Next One*, was published by the Board of Education for Librarianship of the A.L.A. It considered specialization in a subject field antecedent to the study of library science, internship, exchange of positions, and the continuing professional education of librarians as subjects of further study. Training below library school level, distinction between professional and semiprofessional service, and the separation of clerical and professional library work are immediate problems of library training.

A Conference on Education for Librarianship in the South, called by the Southeastern and Southwestern library associations, was held in Atlanta, and was attended by more than 60 educators and librarians. Their recommendations urged that instruction be given in the use and functions of libraries for college students, teachers-in-training, and school administrators; that requirements, of the Southern Association of Colleges and Secondary Schools, for teacher-librarians be raised and enforced; that the careful selection of students, continued limitation of enrollment, and efforts to secure adequate financial support and funds for scholarships be given particular attention by the library schools; and that instruction for Negro

librarians be studied by the A.L.A. Board of Education for Librarianship.

Teacher-librarian courses of less than a full year but at least a half year in length were studied and visited in 22 colleges and teachers colleges for information by the A.L.A. Board of Education for Librarianship from a grant by the Carnegie Corporation of New York.

Employment. During the year there was a considerable increase in the number of positions available in the library field. Many of them, however, were temporary or offered very low salaries. Salaries showed an upward trend in the partial or full restoration of salary reductions in a number of libraries.

Fellowships. The A.L.A. Committee on Fellowships and Scholarships awarded fellowships to eight American and two Canadian librarians for advanced study in library science for 1935-36, from funds provided by the Carnegie Corporation of New York.

Gifts. Numerous gifts from individuals and organizations were received by libraries. Some of the larger gifts include: rare books and manuscripts valued at \$500,000, to the Lockwood Library of Buffalo University by Thomas B. Lockwood; the estate of Dr. Elizabeth B. Cassidy, \$60,000-\$100,000, to Knox College Library; \$50,000 to Michigan State College for books and periodicals on chemical subjects, by Dr. Frank S. Kedzie; and \$250,000 to the Portland (Ore.) Public Library staff pension and retirement fund by the late Winslow B. Ayer.

The Carnegie Corporation of New York has granted Smith College \$175,000 for library development and Vassar College \$160,000 for library endowment. A \$75,000 memorial library and laboratory is being added to the Michael Reese Hospital, Chicago, as the gift of Louis Florsheim.

Grants to Library Schools. Approximately \$83,000 was given to library schools of California, Chicago, Denver, Emory, North Carolina, and Western Reserve universities and Hampton Institute for the year 1935-36 from the Carnegie Corporation of New York. The General Education Board continued its support of the library schools of Louisiana State University, George Peabody College for Teachers, and the College of William and Mary, and of the school library supervisors in several southern states.

Junior College Libraries. The Carnegie Corporation of New York has set up an Advisory Group on Junior College Libraries which probably will publish a list of desirable books and standards and make a survey of junior college libraries similar to the work done five years ago by the Advisory Group on College Libraries.

Legislation. Washington and Georgia made legal provision through their 1935 legislatures for large unit library service. Washington enacted a complete new library law permitting the establishment of county and regional, as well as municipal libraries, while Georgia passed a permissive county library law with provision for contracts between adjacent counties for joint service. At present only two states (outside of New England where the county is not an important governmental unit), Idaho and North Dakota, lack such legislation. South Carolina strengthened its library law by giving authority to the State Library Board to create large library districts.

Publications. Outstanding publications of the year 1934-35 in addition to those mentioned under LIBRARY ASSOCIATION, AMERICAN, were: *American Library Directory 1935*, published by the R. R.

Bowker Company; *Living with Books*, by Helen E. Haines; *Government of the American Public Library*, by Carleton B. Joeckel; *College Library Publicity*, by Guy R. Lyle; *Public Library Buildings*, by Dana Q. McComb; *Australian Libraries*, by Ralph Munn and John Barr; *Origins of the American College Library, 1638-1800*, by Louis Shores; *Special Libraries Directory of the United States and Canada, 1935*, published by the Special Libraries Association; *County Library Service in the South*, by Louis R. Wilson and Edward A. Wight; *What Makes a Book Readable*, by William S. Gray and Bernice E. Leary; *Woodside Does Read! A Survey of the Reading Interests and Habits of a Local Community*, by Grace O. Kelley.

See LIBRARY ASSOCIATION, AMERICAN.

LIBYA, lib'y-a. An Italian colony (Cyrenaica and Tripolitania) in North Africa. Area, 711,012 sq. miles; population (1931), 717,663 including 29,749 Europeans. Chief towns: Tripoli (capital), 91,000 inhabitants in 1934; Bengasi (Benghazi), 43,000; Misurata, 43,000; Homs, 31,000.

Production and Trade. Dates, olives, oranges, lemons, wheat, barley, tobacco, salt, sponges, fish, and almonds were the main products. Livestock in the colony (1931): 650,000 sheep, 380,000 goats, 55,000 cattle, 50,000 camels, and 42,000 donkeys, mules, and horses. The 1933 trade through Tripoli was: imports, 153,043,072 lire; exports, 28,608,247 lire (lira averaged \$0.0667 for 1933).

Government. In 1934-35, revenue proper of the colony was estimated at 70,200,000 lire; state contribution, 165,500,000 lire; special administration, 2,253,000 lire; civil expenditure, 97,175,000 lire; military expenditure, 137,000,000 lire. On Jan. 1, 1934, the country was divided, for administrative and military purposes, into the four provinces of Tripoli, Misurata, Bengasi, and Derna. Governor in 1935, General Italo Balbo. For troop movements in Libya in connection with the Anglo-Italian crisis of 1935, see ITALY under History.

LIEBERMANN, lē'bēr-man, MAX. A German painter and etcher, one of the foremost artists of his time, died at Berlin, Feb. 8, 1935. Born in that city on July 29, 1847, of Jewish parentage, he studied under Steffek in Berlin, under Thumann at Weimar, and under Munkaczy in Paris. The strongest influences in the formation of his art came from the Barbizon painters, with whom he spent the summer of 1873, particularly from Millet, and later from Josef Israels, with whom he was associated during frequent sojourns in Holland. There he copied the works of Frans Hals and studied the life of the peasantry, who long furnished the theme of his finest productions. Following his return to Munich in 1878, his picture "Christ in the Temple," created a controversy as some of the clergy declared it to be irreverent. Thereafter he devoted himself to the study of light and the painting of peasants. In 1884 he settled in Berlin, and there his work did not follow traditional lines.

In spite of adverse criticism he became the leader of the Secessionist movement in northern Germany. The first to introduce the *plein air* methods of the Barbizon school, modified later by impressionistic principles, Liebermann's art was individual, simple, and direct, and although at first labored in technique, it showed great power of rendering movement and effects of atmosphere and light. He favored genre and for this reason was frequently styled an "apostle of ugliness." It may be said that he did for Germany what Millet did for France. Liebermann's first exhibited picture "Woman Plucking Geese" (1872, National Gal-

lery, Berlin), was a striking contrast to the art of the time, and inclined to heaviness and darkness in color, but his development, starting with "Laborers in a Turnip Field" (1876) was steady, and in later years he worked in bright impressionistic colors.

Included in his Dutch themes were: "The Asylum for Old Men," 1881, his first success; "The Cobbler's Shop," 1881, Berlin; "The Flax Barn, Laren," 1887, Berlin; "The Net Menders," 1889, Hamburg; "Woman with Goats," 1890, New Pinakothek, Munich; "The Hog Market, Haarlem," 1891, Mannheim. A good example of modern genre is his "Country Tavern, Bavaria," 1893, Luxembourg, Paris. His later works include "Polo Players," 1902; "Going to School, Edam," 1904, Königsberg; "Summer Evening on the Alster," 1910, Dresden; "Dutch Landscape," 1912, Munich; and many convincing portraits, such as Dr. Bode (National Gallery, Berlin), Professor Virchow; Burgomaster Peterson of Berlin, and Gerhart Hauptmann, 1913. His etchings are masterly yet simple combinations of lines and strokes and are to be found in the leading print-rooms of Europe.

Liebermann became professor at Berlin Academy, and was awarded gold medals at Berlin, Munich, Paris, Dresden, Antwerp, and Venice, was created Knight of the French Legion of Honor, and received Italian, Swedish, Belgian, and other orders. He was a member of the Prussian and Saxon academies, and honorary member of the Société Nationale des Beaux-Arts, Paris, the Société Royale, Brussels, and the Bavarian Academy.

On the anniversary of his 80th birthday Liebermann received the highest decoration conferred on civilians by the German Government—the eagle plaque. Also he was the first to receive the Prussian State gold medal when the custom of conferring this was revived under the Republic. The Prussian Academy of Art held a special exhibition of 100 of his choicest paintings in his honor, and in the catalogue of the Exhibition he wrote a homily for young artists recommending "the Goethean principle of 'eating at every table' and endeavoring to digest every new idea and movement. . . . The 'new' in art, about which we hear so much in the present century, is merely the new artist revealing to us the hitherto unknown soul in an art work."

Because he was a Jew the Nazi press repeatedly assailed him in his later years, and in 1933 he resigned from the presidency of the Prussian Academy of Art, an office he had held for 12 years, saying that, although he still believed that art had nothing to do with politics or race, he could no longer hold his office as he could not conform to the prevailing idea. In December, 1935, a memorial showing of his etchings and lithographs was opened at the New York Public Library.

LIECHTENSTEIN, lîk'ten-shûn. An independent European principality between Austria and Switzerland. Area, 61 sq. miles; population (1930), 10,213. Capital, Vaduz (1715 inhabitants).

Production and Trade. Agriculture and textiles were the main industries. Cattle rearing, for which the Alpine pastures are well adapted, was highly developed. Liechtenstein was included in the Swiss Customs Union in January, 1924, and Swiss currency has been in use since February, 1921. The posts and telegraphs were administered by Switzerland.

Government. In the budget for 1935, revenue was estimated at 1,432,790 francs; expenditure, 1,424,157 francs (Swiss franc averaged \$0.3253 during October, 1935). The public debt on Jan.

1, 1935, was 4,383,000 francs. According to the constitution of Oct. 5, 1921, the monarchy was hereditary in the male line. It provided for a Diet of 15 members elected for 4 years by general and secret ballot. Citizens over 21 years were entitled to vote. The foreign interests of Liechtenstein were represented by Switzerland. Reigning Prince in 1935, Francis I. Administrator, Dr. Joseph Hoop.

LIFE INSURANCE. See **INSURANCE.**

LIGGETT, LIEUT. GEN. HUNTER, U.S.A., RET. An American army officer, died in San Francisco, Calif., Dec. 30, 1935. Born in Reading, Pa., Mar. 21, 1857, he was graduated from the U.S. Military Academy at West Point in 1879. He was then assigned to the 5th Infantry as a second lieutenant, and received his first military experience in the Indian Wars. He also served during the Spanish-American War and during the Philippine insurrection as a major of volunteers. His rise was rapid, and in 1909 he entered the Army War College. Upon the completion of his course in the following year he was appointed director of studies. In February, 1913, he was made a brigadier-general, and a few months later was named director of the War College. In this year he had charge of the reunion of Civil War Veterans—Union and Confederate—at Gettysburg, Pa., and represented the Secretary of War.

During the Mexican border trouble in 1914, General Liggett was sent to Texas to command the 4th Brigade of the 2d Division, during which time he put into effect the theories formed at the War College. In the following year he was made commander of the Provisional Infantry Brigade and Post Ft. William McKinley in the Philippines, and from Apr. 15, 1916, until Apr. 15, 1917, was commander of the Department of the Philippines.

At the entrance of the United States into the World War he was given command of the Western Department. In September he was given command of the 41st Division of the American Expeditionary Force, serving until Jan. 20, 1918, when he was selected to command the 1st Army Corps, then being organized. He held this position until October 12, again from October 15 to November 11 as lieutenant general, and later until Apr. 20, 1919.

The First Army Corps, under his leadership, participated in the 2d Marne Campaign (July 14 to August 7) and played a prominent part therein. They were then shifted east to participate in the St. Mihiel salient from September 12 to 17. General Liggett showed his sound judgment by arguing against a long artillery bombardment because of the absence of the surprise element of battle. After St. Mihiel was taken, his Corps was moved westward to take part in the Meuse-Argonne Offensive and by November 8 the Argonne forest was in the hands of the Americans. On October 15th he was promoted to lieutenant general and was given command of the 1st Army to succeed General Pershing. As head of the First Army he directed the final phase of the Meuse-Argonne offensive, and his troops reached the hills north of Verdun held by Germany from the beginning of the war. At the close of the War he was given the honor of commanding the 3d Army of Occupation of Germany, and was returned home in 1919. He was then given command of the Western Department at San Francisco, and was automatically reduced to the rank of major general. He retired from active duty in March, 1921. By act of June 21, 1930, he was restored

to the rank of lieutenant general on the retired list.

General Liggett was a brilliant commander in the field and a master of tactics and strategy, as well as a firm disciplinarian. His discipline was tempered, however, with a sincere interest in the well being of the private soldier. For his services in the War he received the Distinguished Service Medal of the United States, the Order of Leopold, Belgium, Order of St. Lazarus, Italy, Order of the Sun, Peru, the War Medal, Panama, and was made a commander of the French Legion of Honor.

LIGHTHOUSES. In the annual report of the Secretary of Commerce for the year ending June 30, 1935, the retirement on May 31 of George R. Putnam, Commissioner of Lighthouses since 1910 and the appointment of H. D. King as his successor were noted. The report stated further that the Lighthouse Service is becoming increasingly mechanized through the application of modern mechanical devices and equipment. This equipment has resulted in better aids to navigation and has been a factor in making possible the extension of the Service to meet the growing needs of navigation at a minimum of cost and with a gradual reduction in operating personnel.

Allotments from the Public Works Administration totaling \$5,620,334 from funds provided by the National Industrial Recovery Act have enabled the Lighthouse Service during the past two years to materially improve its plant and carry out a considerable number of desirable and economical projects more rapidly than heretofore possible of accomplishment under the normal Public Works appropriations. During the two-year period this Public Works programme has been under way no direct appropriations for special works for the Lighthouse Service have been made by Congress, as has been done in prior years.

This work has included the following: The erection of 10 major light-station structures, 4 in replacement of lightships, 3 in replacement of former structures, and 3 new ones, 6 of these new stations being on submarine sites; the provision of 5 new lighthouse depots and improvements of 10 others; the construction of 2 new district-office buildings on sites at depots, effecting a desirable concentration of administrative and supply operations; the construction of 3 new lighthouse tenders and 2 derrick barges and the extensive overhauling of 16 lighthouse tenders, including reboiling, change to oil burning, etc.; similar overhaul of 6 lightships; the improvement of housing facilities by new construction at 10 stations and repairs at a number of others; improvement of the mechanical equipment of stations and particular improvements in the character of radiobeacon transmitting equipment, some 30 stations having been provided with modern equipment, replacing obsolete units and securing the great advantages of frequency stability and freedom from interference resultant therefrom. It was anticipated that all projects would be completed during the construction season of 1935.

During the year continual progress was made in the improvement of aids to navigation; 59 lights were changed from fixed to flashing or occulting, the illuminant of 87 lights was changed to electric, and the illuminant of 27 to acetylene. Sodium-vapor lamps are in use experimentally at two stations. Three new radio beacons were established, increasing the total number of such installations to 108.

On June 30, 1935, there were 24,459 aids to navigation maintained by the Service, a net increase

over the previous year of 862. There were 1013 aids discontinued during the year as being no longer necessary or as having been replaced by more suitable aids.

LIME. The sales of lime in 1935 by producers in the United States amounted to 2,955,000 short tons valued at \$21,438,000, according to preliminary figures furnished by lime manufacturers to the U.S. Bureau of Mines. This was an increase of 23 per cent in quantity and 25 per cent in value compared with sales of 2,397,087 tons valued at \$17,164,024 in 1934. The average value per ton in 1935 was \$7.25; in 1934 it was \$7.16. The total sales of lime in 1935 included 990,000 tons of hydrated lime valued at \$7,764,000, an increase of 19 per cent in quantity and 23 per cent in value compared with 1934 (829,430 tons valued at \$6,324,623). The average value per ton of hydrated lime in 1935 was \$7.84; in 1934 it was \$7.63.

Preliminary reports of sales of lime in 1935, according to classes, were as follows: Building lime, 677,000 tons valued at \$5,716,000, compared with 511,419 tons valued at \$4,260,865 in 1934, an increase of 32 per cent in quantity and 34 per cent in value; chemical lime (not including dead-burned dolomite), 1,570,000 tons valued at \$10,255,000, compared with 1,338,723 tons valued at \$8,726,617 in 1934, an increase of 17 per cent in quantity and 18 per cent in value; dead-burned dolomite (refractory lime), 430,000 tons valued at \$3,600,000, compared with 324,868 tons valued at \$2,698,414 in 1934, an increase of 32 per cent in quantity and 33 per cent in value; agricultural lime, 275,000 tons valued at \$1,857,000 compared with 222,077 tons valued at \$1,478,128 in 1934, an increase of 24 per cent in quantity and 26 per cent in value.

Sales of 717,000 tons of lime valued at \$5,628,000 were reported for Ohio, the leading State in the production of lime. This was an increase of 28 per cent in quantity and 31 per cent in value over 1934. Pennsylvania ranked next to Ohio in annual production of lime, with an output of 502,000 tons valued at \$3,587,000, an increase of 16 per cent in quantity and 13 per cent in value over 1934—434,519 tons valued at \$3,165,539. Virtually all the other lime producing States showed increased production, and the number of plants in operation in 1935 was practically the same as in 1934.

Figures compiled from records of the Bureau of Foreign and Domestic Commerce show that for 1935 exports of lime amounted to 3939 short tons valued at \$64,085, of which 43 per cent went to Canada and the remainder in small lots to various other countries. There was also shipped to United States island possessions 2013 tons of lime valued at \$30,015. The imports during 1935 were as follows: Quicklime, 3413 short tons valued at \$36,032, of which 3376 tons valued at \$34,355 came from Canada; hydrated lime amounting to 1030 tons valued at \$10,571, of which 917 tons valued at \$8746 came from Canada, and 7519 tons of dead-burned dolomite valued at \$189,714, of which all but 32 tons came from Canada.

LIMNOLOGY. See ZOOLOGY.

LINDENTHAL, GUSTAV. An American engineer, died at Metuchen, N. J., July 31, 1935. Born at Brünn, Austria, May 21, 1850, he was educated at the Provincial College in his native city and at the Polytechnical Institute in Vienna. He began his engineering career in 1870, and from that time until 1874, when he arrived in the United States, he was engaged as a railroad engineer in different parts of Europe.

His first employment in the United States was

as a mason on the Centennial Exposition in Philadelphia. Later he became an engineer with the Exposition and at its close in 1877 went with the Keystone Bridge Company, where he was consulting engineer in the construction of western railroads and bridges. During the period 1877-90, he was a consulting engineer with offices in Pittsburgh, being associated with the Atlantic and Great Western Railroad (now the Erie), 1879-81, as engineer and made a specialty of bridge work, and with the Monongahela Bridge Co., 1881-89.

The year 1890 saw him in New York, when he became chief engineer and president of the North River Bridge Co. Some time before this he had proposed the bridging of the Hudson River to the Pennsylvania Railroad, and as the plans had been approved by the War Department, the Company was formed. The plans called for the largest span and the heaviest bridge yet proposed, for it was to be a two-deck suspension bridge, with river span, 3240 ft. long and each of the two shore spans, 1650 ft., the whole, including approaches, to be 7340 ft. Elaborate plans were developed and its feasibility was accepted by engineering experts called in to pass upon the project, but though considered a bold and interesting engineering conception, it was questionable whether from an economic standpoint it could compete successfully with a system of tunnels. Because of the economics involved, the Pennsylvania decided to build tunnels, and Mr. Lindenthal's plans were not carried out, but he served the Pennsylvania lines as consulting engineer from 1902-03.

During that same period, Mr. Lindenthal served as Commissioner of Bridges under Mayor Low, and during his administration plans were made for the Blackwell Island Bridge (now known as the Queensborough), the Manhattan Bridge (in which he introduced the eyebar chain suspension design), and the reconstruction of the old Brooklyn Suspension Bridge. Subsequently, he designed and built the large wharf and steamer piers at Baltimore.

In 1904, he became consulting engineer to the New York Connecting Railroad, a short road but 10 miles long, which was to connect the New York, New Haven, and Hartford Railroad with the Pennsylvania. The problem to be solved was the carrying of passengers and freight from New England through New York to the west without change of trains. The bridging of Long Island Sound and Hell Gate in connection with this project proved a difficult and costly undertaking. The curved approach to Hell Gate made the use of a cantilever or a suspension bridge impossible, so Mr. Lindenthal designed a braced steel arch type of bridge. The design of this bridge included a main span of 1000 ft., which at that time was the longest and heaviest arch span in the world. The roadway, on which four railroad tracks were laid, was 140 ft. above the water in the clear, while the top of the arch was 265 ft. above the water. The abutment towers were of granite masonry and concrete, 200 ft. in height. For the bridge alone, 18,000 tons of steel were required, and for the viaducts and other approaches for the whole structure, which totaled some 3½ miles in length, there were required about 70,000 tons, the cost approximating \$25,000,000.

Because of the tides and the condition of the river bottom, temporary support could not be laid, so the bridge was built in cantilever fashion, with temporary weights added to the shore foundations, to counterbalance the weight of the projecting arms. The bridge was first opened to traffic during March, 1917.

Before the completion of the Hell Gate project, Lindenthal became consulting engineer of the bridge of the Chesapeake and Ohio Northern Railroad over the Ohio River at Sciotoville, O., a bridge of two spans, each 775 ft. long of continuous riveted trusses, and the longest span of its type then conceived. This bridge was completed in 1917. In 1919 he was named consulting engineer for the proposed bridge crossing the Detroit River from Detroit, Mich., to Windsor, Can. The following year the subject of a suspension bridge across the Hudson River from mid-town New York to the New Jersey shore was revived, and Mr. Lindenthal discussed his plans for such a bridge (for illustration, see YEAR BOOK, 1921) in a paper read before the annual meeting of the American Society of Mechanical Engineers in New York, Dec. 8, 1920. However, this project was not pressed to construction. Before the Philadelphia chapter of the American Society of Civil Engineers, in 1921, Lindenthal read a paper that contained a remarkable outline of long-span bridge fundamentals. Until shortly before his death he was connected as a consulting engineer with various bridge building programmes throughout the United States.

A frequent contributor to technical and scientific journals, and the recipient of many honors conferred for his outstanding work in the engineering field, Lindenthal was awarded the Thomas Fitch Rowland prize by the American Society of Civil Engineers in 1883 for his paper on the Monongahela Bridge, and in 1922 he received the same award for his paper on "The Continuous Truss Bridge over the Ohio River at Sciotoville, O., of the Chesapeake and Ohio Northern Railway." In 1930 he received the first award from the Society of the Phebe Hobson Fowler Architectural Award, which has since been discontinued. The Polytechnical School at Dresden, Germany, conferred the degree of Doc. Eng. *honoris causa* on him in 1911. He was the first American so honored. Two years later he received the gold medal of the International Technical Art Exhibition at Leipzig for his plans of Hell Gate Bridge.

LINNÆAN SOCIETY. See BOTANY.

LIONS CLUBS, INTERNATIONAL ASSOCIATION OF. An organization of business and professional men's clubs, formed in Chicago, Ill., in 1917 for the purpose of promoting good government and good citizenship, encouraging efficiency, and promoting high ethical standards in business and the professions. In 1935 it was composed of 2712 clubs, with a membership of approximately 80,000. At the international convention in Mexico City, Mexico, the following officers were elected: President Richard J. Osenbaugh, Denver, Colo.; vice-presidents, Edwin R. Kingsley, Parkersburg, W. Va., Frank V. Birch, Milwaukee, Wis., and Walter F. Dexter, Sacramento, Calif. Melvin Jones, the founder of the association, has been secretary-treasurer from the first. The official magazine is *The Lion*. Headquarters are at 332 South Michigan Avenue, Chicago, Ill.

LIQUOR REVENUE. See PROHIBITION; TAXATION.

LITERATURE, ENGLISH AND AMERICAN. The destruction of NRA may have been a boon to American business, but it seems not to have benefited American publishers and booksellers. Though during 1935 the book business improved the country over, both publishers and booksellers worried about the New York City war with the department stores over their practice, resumed on the collapse of NRA, of selling books below cost. At the end of

the year, attempts to curb the practice under state law had thus far been defeated.

"Proletarian" literature of radical tendency increased notably during the year. A new left-wing book club appeared.

Some fluttering among the critical magazines and their reviewers was caused by attacks in *The Nation*. The magazines, it was said, pandered to advertisers; the reviewers had no genuine standards. These charges, however, concerned almost exclusively the treatment given novels and their authors.

The British book trade was reported to be depressed during the year, first by the King's Jubilee, and then by the general election and foreign crisis.

Biography. Biographers were very attentive to British literary figures during 1935, especially poets. Two books were called simply *Milton*, one by Hilaire Belloc, one by Rose Macaulay. With Peter Quennel's *Byron: the Years of Fame*, came Frances Winwar's *The Romantic Rebels*, about Byron, Shelley, Keats, et al. Ernest de Selincourt edited *Early Letters of William and Dorothy Wordsworth, 1787-1805*, with which might be associated Edith J. Morley's *Life and Times of Henry Crabb Robinson*. Stephen Gwynn published *Oliver Goldsmith*, and Charles Williams *Rochester*. Claude C. Abbott edited *The Letters of Gerard Manley Hopkins to Robert Bridges*. And H. W. Donner cleared up mysteries about *Thomas Lovell Beddoes*.

Concerned with British novelists were: *Letters of Laurence Sterne*, edited by Lewis Perry Curtis; vols. viii and ix of *The Letters of Sir Walter Scott*, to 1826, edited by H. J. C. Grierson; *The Sentimental Journey*, an attack on Charles Dickens, by Hugh Kingsmill; *D. H. Lawrence*, by E. T., the "Miriam" of *Sons and Lovers*, Arnold Bennett, by Dorothy Cheston Bennett; *Joseph Conrad and His Circle*, by Jessie Conrad; and *Epitaph on George Moore*, by Charles Morgan. Other British writers were dealt with in *The Letters of Charles Lamb*, edited by E. V. Lucas; *The Letters of Jonathan Swift to Charles Ford*, edited by David Nichol Smith; Arthur Bryant's *Samuel Pepys the Years of Peril, 1669-1683*; Samuel Shellabarger's *Lord Chesterfield*; Gwyn Jones' *Richard Savage*; Frank Hird's *I. M. Stanley*; and, about William Hazlitt, *The Fool of Love*, by Hesketh Pearson, who also published *Gilbert and Sullivan*. Autobiographies were: J. Middleton Murry's *Between Two Worlds*, and Francis Stuart's *Things to Live For*.

Books about British political persons were scattered and scanty, strange to say. There were: E. F. Benson's *Queen Victoria*; Roger Fulford's defense of *George the Fourth*; and Agnes Mure Mackenzie's *Robert Bruce, King of Scots*, about royalty, as well as a number of Jubilee books about George V. About the less well born were: *Buckingham, 1592-1628*, by M. A. Gibb; *Thomas More*, by R. W. Chambers; *Strafford, 1593-1641*, by C. V. Wedgwood; *Strange Destiny*, by A. Mervyn Davies, about Warren Hastings; *Haig*, by Duff Cooper; *Lord Brougham*, by G. T. Garratt; *Sir Walter Raleigh*, by Edward Thompson; and *Down the Years*, autobiography by Sir Austen Chamberlain.

Concerning other Britishers were: *God's Soldier: General William Booth*, by St. John Ervine; *John Nash*, the architect, by John Summerson; *Gerald*, by Daphne du Maurier, about her actor father; *Randall Davidson*, by G. K. A. Bell; *Mungo Park and the Quest of the Niger*, by Stephen Gwynn; and *I Write as I Please*, by Walter Duranty.

Stanley T. Williams' *The Life of Washington*

Irving stood out among biographies of American literary figures. Autobiographies were: *The Living of Charlotte Perkins Gilman*; *If This Be I*, by Margaret Deland; *A Footnote to Folly*, by Mary Heaton Vorse. The centenary brought *Mark Twain*, by Edward Wagenknecht, and *Mark Twain's Notebook*, edited by Albert Bigelow Paine. S. Foster Damon published *Amy Lowell*; Nancy Hoyt *Elinor Wylie*, and Edgar Lee Masters *Vachel Lindsay*, about recent poets.

With vols. iii and iv, Douglas S. Freeman's *Robert E. Lee* completed the outstanding work about American political figures during the year. Burton J. Hendrick contributed *The Lees of Virginia*. Ray Stannard Baker published vol. v of *Woodrow Wilson, 1915-1917*, and *War Memoirs of Robert Lansing* also appeared. The post-Civil War period was covered in William B. Hesseltine's *Ulysses S. Grant, Politician*, Thomas Frederick Woodley's *Thaddeus Stevens*, and Donald Barr Chidsey's *The Gentleman from New York*, Roscoe Conkling. Other American politicians: *Dwight Morrow*, by Harold Nicolson; *John Jay*, by Frank Monaghan; *The American Talleyrand*, Van Buren, by Holmes Alexander; and *George Washington*, by Michael de la Bedoyere.

Americans neither political nor literary were popular as usual, and of remarkable interest. Autobiographies by journalists were conspicuous, such as: Vincent Sheean's *Personal History*; Franklin P. Adams' *The Diary of Our Own Samuel Pepys*; Marguerite Harrison's *There's Always Tomorrow*. A prize-winning biography was *Old Jules*, by Mari Sandoz, about a Nebraska pioneer. Clarence Day's *Life with Father* was delightful; Tom Kromer's *Waiting for Nothing* made a sensation in England, the autobiography of a down-and-out; William Seabrook's *Asylum* described modern treatment of the insane. Other important American biographies and autobiographies were: George H. Doran's *Chronicles of Barabbas*, a publisher; *Autobiography of John Hays Hammond*; Harold E. Stearns' *The Street I Know*; Allan Nevins' *Abram S. Hewitt*; Hugh Morrison's *Louis Sullivan*; Ralph Barton Perry's *The Thought and Character of William James*; Thomas Boyd's *Poor John Fitch*, reputed inventor of the steamboat; George Kitchin's *Prisoner of the Opium*. Three books about the wealthy were: *The Magnate*, William Boyce Thompson, by Hermann Hagedorn; *"King Lehr" and the Gilded Age*, by Elizabeth Drexel Lehr; and *The Du Pont Dynasty*, by John K. Winkler.

About people not British or American: Francis Hackett's *Francis the First*; vols. ii and iii of *The Story of My Life*, by Marie, Queen of Rumania; *Joan of Arc*, by Milton Waldman; Evarts S. Scudder's *Mirabeau*; J. M. Thompson's *Robespierre*; Stephen Graham's *Tsar of Freedom, Alexander II*; G. R. Richards' *Cicero*; Shidzué Ishimoto's *Facing Two Ways*, Western life versus Japanese; Margaret Goldsmith's *Seven Women Against the World*, from Corday to Goldman; *Restless Days*, by Lilo Linke, a fugitive from Nazidom; *My Old World*, by Ernest Dimnet. Vols. xv, xvi, and xvii of *The Dictionary of American Biography* appeared, edited by Dumas Malone.

Criticism and the History of Literature. Discussion of Shakespeare was prominent in the year's work, as shown in Caroline F. E. Spurgeon's *Shakespeare's Imagery and What It Tells Us*; J. Dover Wilson's *What Happens in "Hamlet"*; Richard David's *The Janus of Poets*, because poet and dramatist; Sir John Squire's *Shakespeare as a Dramatist*; M. C. Bradbrook's *Themes and Con-*

ventions of *Elizabethan Tragedy*; and Gerald H. Rendall's *Personal Clues in Shakespeare's Poems and Sonnets*, and G. W. Phillips' *Sunlight on Shakespeare's Sonnets*, which were two mutually contradictory anti-Shakespearean works.

About poetry and poets were: Sir Arthur Quiller-Couch's *The Poet as Citizen*; W. J. Calvert's *Byron: Romantic Paradox*; Willard L. Sperry's *Wordsworth's Anticlimax*; Gilbert Thomas' *William Cowper and the 18th Century*; F. W. Bateson's *English Poetry and the English Language*, asserting that the history of poetry is the history of language changes; Thomas Gilby's *Poetic Experience*, examining Thomistic definitions; *This Modern Poetry*, by Babette Deutsch.

General works included: I. A. Richards' *Colebridge on Imagination*; Elizabeth Drew's *The Enjoyment of Literature*; Edwin Valentine Mitchell's *The Art of Authorship*. Fred Lewis Pattee published *The First Century of American Literature, 1770-1870*. About foreign literature appeared: Havelock Ellis' *From Rousseau to Proust*; W. H. Bruford's *Germany in the 18th Century: the Social Background of the Literary Revival*; and F. C. Green's *Minuet: a Critical Survey of French and English Literary Ideas in the 18th Century*.

About the drama: Harley Granville-Barker's *The Study of Drama*; George Jean Nathan's *Passing Judgments*; M. Joan Sargeant's *John Ford*. About the novel: David Cecil's *Early Victorian Novelists*; Harlan Hatcher's *Creating the Modern American Novel*; Ernest A. Baker's vol. vi of *The History of the English Novel: Edgeworth, Austen, and Scott*.

Drama. The most promising American playwright in some years, Clifford Odets, published *Three Plays*, "proletarian." Albert Maltz' *Black Pt* could also be so described. But the year was marked by a revival of the poetic play, for examples: T. S. Eliot's *Murder in the Cathedral*, about Becket; W. H. Auden and Christopher Isherwood's *The Dog Beneath the Skin*, superficially farce, fundamentally serious; Archibald MacLeish's *Panic*, about the depression; Maxwell Anderson's *Winterset* and *Valley Forge*; W. B. Yeats' *Wheels and Butterflies*. Mr. Yeats also published his *Collected Plays*. Notable discussion plays were: S. N. Behrman's *Rain from Heaven*; John Haynes Holmes and Reginald Lawrence's *If This Be Treason*; Elmer Rice's *Two Plays*; and *White Man*, by Samson Raphaelson, in the same volume with *Accent on Youth*, a slick comedy. H. G. Wells published a prophetic movie *Things to Come*. Good farces were: John Cecil Holm and George Abbott's *Three Men on a Horse* and Lawrence Riley's *Personal Appearance*. Sidney Howard adapted *Paths of Glory*, and Zoe Akins *The Old Maid*, Pulitzer Prize winner. Lennox Robinson published *More Plays*; Sinclair Lewis and Lloyd Lewis *Jayhawkers*; Noel Coward *Point Valaine*; James Bridie *The Black Eye* and, with Claud Gurney, *Mary Read*; R. C. Sherriff and J. de Cassalis *St. Helena*; R. E. Sherwood *The Petrified Forest*; Paul Green *Roll, Sweet Chariot*; Denis Johnston *Storm Song* and *A Bride for the Unicorn*; J. B. Priestley *Duet in Floodlight*. Notable anthologies were: *A Treasury of the Theatre*, by Burns Mantle and John Gassner; and *Continental Plays*, by Thomas H. Dickinson.

Economics. Frederick Lewis Allen's *The Lords of Creation* was entertaining financial and corporate history, 1893-1933. Stuart Chase's *Government in Business* advocated its extension as inevitable. Lewis H. Corey's *The Crisis of the Middle*

Class and John Strachey's *The Nature of Capitalist Crisis* were Marxian programmes. Paul H. Douglas, in *Controlling Depressions*, offered an elaborate non-Marxian programme. With *The Economic Consequences of the New Deal*, Benjamin Stolberg and Warren Jay Vinton attacked from the left, while Hugh S. Johnson, in *The Blue Eagle from Egg to Earth*, defended the NRA. George F. Warren and Frank A. Pearson, in *Gold and Prices*, still insisted the first governed the second. *The Chart of Plenty*, by Harold Loeb and associates, showed the possibility of \$4300 annual income per family in America. Walter B. Pitkin had the middle class saving capitalism in *Capitalism Carries On*. Clark Foreman and Michael Ross' *The Consumer Seeks a Way*, Arthur Kallet's *Counterfeit*, exposing frauds, and E. F. M. Durbin's *The Problem of Credit Policy*, dealt with consumers' problems. Charles A. Beard's *The Open Door at Home* advocated a planned economy. Sir Walter Layton and Geoffrey Crowther published *An Introduction to the Study of Prices*. A. C. Pigou's *Economics in Practice* discussed many modern problems.

Education. Vol. ii of Rexford G. Tugwell and Leon H. Keyserling's *Redirecting Education* was a survey of European and Canadian practice. Merle Curti published *The Social Ideas of American Educators* from the colonies to John Dewey. W. B. Curry's *Education in a Changing World* advocated education for freedom even if freedom diminishes. James Wechsler's *Revolt on the Campus* showed what students think and feel.

Essays. Kenneth Roberts' *For Authors Only* poked fun at foreigners and other things. Heywood Broun's *It Seems to Me* was the product of daily column-writing. Bertrand Russell's *In Praise of Idleness and Other Essays* was mind-disturbing. Sherwood Anderson, in *Puzzled America* and *No Swank*, gave the fruit of travels and interviews. Carl Becker's *Everyman His Own Historian*, and Katharine Garvin's *The Great Tudors* were historical. Communist satire of the contemporary appeared in Robert Forsythe's *Redder than the Rose*. An anthology of similar tendency was *Proletarian Literature in the United States*, edited by Granville Hicks. Feliciano, by Stark Young, gave the Southern scene. Tirades and panegyrics marked Osbert Sitwell's *Penny Foolish*. Walter de la Mare's *Early One Morning in the Spring* was about childhood. Don Marquis's *archy does his part* was humorous. Geoffrey Grigson edited *The Arts Today*, literary and graphic. Sir J. G. Frazer published anthropological gleanings in *Creation and Evolution in Primitive Cosmogonies and Other Pieces*. Joseph Wood Krutch's *Was Europe a Success?* was political and philosophical. Carl van Doren edited *An Anthology of World Prose*. Also: *Pleasure Trove*, by E. V. Lucas, and *Avowals and Denials*, by G. K. Chesterton.

Fine Arts. National or period studies were numerous, as: Laurence Binyon's *The Spirit of Man in Asian Art*; D. Talbot Rice's *Byzantine Art*; C. Leonard Woolley's *The Development of Sumerian Art*; Roger Hinks' *Carolingian Art*; C. R. Morey's *Christian Art*; Eric Maclagan's *Italian Sculpture of the Renaissance*; Arthur Gardner's *A Handbook of English Medieval Sculpture*. Modernism received attention in: R. H. Wilewski's *The Modern Movement in Art*; Edward F. Rothschild's *The Meaning of Unintelligibility in Modern Art*, explaining it as a kind of psychic chaos; James Thrall Soby's *After Picasso*. Sir Reginald Blomfield discussed *Six Architects*, Wren the latest. Kenneth Clark published the notable

Catalogue of the Drawings of Leonardo da Vinci at Windsor Castle. A history was *Art in the Western World*, by David M. Robb and J. J. Garrison. Others were: *Concerning Beauty*, by Frank Jewett Mather, Jr.; *Progress of Archaeology*, by Stanley Casson; *The Art of Renoir*, by Albert C. Barnes and Violette de Mazia.

History. Western civilization was a favorite subject, as witness: *The History of Western Civilization*, by Harry Elmer Barnes and Henry David; vol. ii, *Rome and Christendom*, of *European Civilization: Its Origin and Development*, edited by Edward Eyre; *The Story of Civilization*, by Will Durant, vol. i, *Our Oriental Heritage*; *A History of Europe*, three vols., by H. A. L. Fisher. In ancient history appeared: *A History of the Roman World from 146 to 30 B.C.*, by Frank Burr Marsh; *The Achievement of Rome*, by William Chase Greene; vol. x of *The Cambridge Ancient History*, *The Augustan Empire*, edited by S. A. Cook and others; and *Ancient Ireland*, by R. A. S. Macalister. In medieval history were: *The Kingdom of the Crusaders*, by Dana Carleton Munro; *A History of the Anglo-Saxons*, by R. H. Hodgkin; *The Rise of the Stewarts*, to Flodden, by Agnes Mure Mackenzie; *The Birth of the Middle Ages, 395-814*, by H. B. Moss.

In modern British history appeared: *Early Victorian England*, edited by G. M. Young; *English Radicalism 1832-1852*, by S. Maccoy; *The Harvest of Victory, 1918-1926*, by Esme Wingfield-Stratford; two Jubilee books: *The Reign of George V*, by D. C. Somervell, and *The People's King*, by John Buchan; *The Strange Death of Liberal England, 1910-14*, by George Dangerfield; vol. ii of *Our Own Times, 1913-35*, by Stephen King-Hall; a diplomatic history: *Israeli, Gladstone, and the Eastern Question*, by R. W. Seton-Watson; and a city history: *Brighton*, by Osbert Sitwell and Margaret Barton.

In American history: vol. i, *The Settlements*, of Charles M. Andrews' *The Colonial Period of American History*; Frederick Jackson Turner's *The United States, 1830-1850*; Andrew C. McLaughlin's *A Constitutional History of the United States*; Alfred B. Williams' *Hampton and His Red Shirts*, South Carolina 1876; *Road to War: America 1914-1917*, by Walter Millis; vol. vi of *Our Times. The United States 1900-1925. The Twenties*, by Mark Sullivan; Walter Prescott Webb's *The Texas Rangers*; *Documents of American History*, edited by Henry Steele Commager; *Privileged Characters*, by M. R. Werner, about recent government and financial scandals; *Ordeal by Fire*, informal history of the Civil War, by Fletcher Pratt; *Canada and the American Revolution*, by George M. Wrong; *The Spanish Conquistadors*, by F. A. Kirkpatrick; *The Conquest of the Maya*, by J. Leslie Mitchell, mostly pre-Spanish history, despite title; *The Mexican Adventure*, Maximilian's, by Daniel Dawson.

Other histories were: vol. iv, *Philip the Prudent*, of Roger Bigelow Merriman's *The Rise of the Spanish Empire in the Old World and the New*; J. Hampden Jackson's *The Post-War World*; C.R.M.F. Cruttwell's *A History of the Great War*; R. T. Clark's *The Fall of the German Republic*; William Henry Chamberlin's *The Russian Revolution, 1917-21*; Hendrick Willem van Loon's *Ships and How They Sailed the Seven Seas*; Leonard Outhwaite's history of exploration, *Unrolling the Map*; and Henry Osborn Taylor's *A Layman's View of History*.

Novels. Thomas Wolfe's eagerly awaited sec-

ond novel, *Of Time and the River*, showed a young man living tumultuously, in America and abroad. Sinclair Lewis' *It Can't Happen Here* described an American Fascist Revolution. Robert Brif-fault's *Europa* revealed the disintegrating pre-war world. Humphrey Cobb's *Paths of Glory* angered against war. A. J. Cronin's *The Stars Look Down* gave a mining community between 1903 and 1933. The social interest of these last four was evident.

And the same tendency could be seen in the large group of proletarian novels. James T. Farrell published the trilogy of a Chicago tough boy, *Studs Lonigan*. Grace Lumpkin's *A Sign for Cain*, about share-croppers, advocated communism. William Cunningham's *The Green Corn Rebellion* showed farmers revolting against war in 1917. *The Furies*, by James Hanley, were an Irish family in an English seaport. A harassed negro was shown in Robert Rylee's *Deep Dark River*. Jack Conroy's *A World to Win* dealt with four people in the depression. Other proletarian novels were: Edward Anderson's *Hungry Men*; Henry Roth's *Call It Sleep*, a New York East Side small boy; Walter Greenwood's *The Time Is Ripe*, English slums; Thomas Boyd's *In Time of Peace*; Walter Havig-hurst's *Pier 17*, a seamen's strike.

Regionalism remained popular with novelists. About Maine: Rachel Field's *Time Out of Mind*; Mary Ellen Chase's *Silas Crockett*; Robert P. Tristram Coffin's *Red Sky in the Morning*; Gladys Hasty Carroll's *A Few Foolish Ones*. About the South: Berry Fleming's *Siesta*; Elizabeth Madox Roberts' *He Sent Forth a Raven*, Kentucky; William Faulkner's *Pylon*, barnstorming aviators; Erskine Caldwell's *Journeyman*, Georgia; Marjorie Kinnan Rawlings' *Golden Apples*, Florida; Paul Green's *This Body the Earth*, and Fielding Burke's *A Stone Came Rolling*, North Carolina. The West: H. L. Davis' *Honey in the Horn*, Oregon; John Steinbeck's *Tortilla Flat*, California; Hope Williams Sykes' *Second Hoeting*, Colorado. Other regional novels: Edna Ferber's *Come and Get It*, Wisconsin; and John Peale Bishop's *Act of Darkness*, West Virginia.

Successful novels by women about women were: Willa Cather's *Lucy Gayheart*, a Nebraska music teacher; Ellen Glasgow's *Vein of Iron*, a long-sufferer; Enid Bagnold's *National Velvet*, a girl and a horse; Margaret Ayer Barnes' *Edna, His Wife*, married to a success.

The vogue for history almost disappeared. In *Solomon, My Son!* John Erskine followed his formula. *Free Forester*, by Horatio Colony, was about frontier days in Kentucky. Harry Sackler's *Festival at Meran* dealt with a Jewish revolt against Romans.

Fantasy was more notable: E. R. Eddison's *Mistress of Mistresses*, a land after death; Algernon Blackwood's *The Fruit Stoners*, a little girl's dreams; Eugene Lohrke's *The First Bus Out*; Charles G. Finney's *The Circus of Doctor Lao*; Joseph O'Neill's *Land Under England*.

Maybe Thornton Wilder's *Heaven's My Destination* was satire on the American brand of Christianity. Anyway, Phil Stong satirized Hollywood in *The Farmer in the Dell* and New York sophisticates in *Week End*. And Thomas W. Duncan's *O, Chataqua* was satirical, as was T. S. Stribling on politics, in *The Sound Wagon*.

John Masefield's *Victorious Troy* gave a ship in a storm. John O'Hara's *Butterfield 8* was about a speakeasy girl. In *The Inquisitor*, by Hugh Walpole, a cathedral town was melodramatized. George Santayana's *The Last Puritan* and L. H. Myers'

The Root and the Flower were philosophical novels. MacKinlay Kantor's *The Voice of Bugle Ann* showed American fox-hunting. In *Road of Ages*, Robert Nathan imagined Jews expelled from civilization. Pearl Buck's *A House Divided* showed China today. William McFee's *The Beachcomber* was a sea-captain ruined by women. Thomas Hardy's *An Indiscretion in the Life of an Heiress*, was his "lost" first novel. Lloyd C. Douglas' *Green Light* was religious therapeutics. Mazo de la Roche's *Young Renny* took place before the White-oak saga began. *The Man Who Had Everything*, by Louis Bromfield, was a successful playwright. Christopher Isherwood showed a thorough scamp in *The Last of Mr. Norris*. Parts of trilogies or tetralogies were: *Love in Winter*, by Storm Jameson; *We Are Betrayed*, by Vardis Fisher; *Smith*, by Branch Cabell; *Grey Granite*, by Lewis Grassic Gibbon; *Shining and Free*, by G. B. Stern.

Picture Books. A vogue this year, worthy of separate notice, was for large volumes of pictures, with a little text. Two such were of news: *The Breathless Moment*, by P.V.D. Stern and Herbert Asbury, and *Eyes on the World*, by M. Lincoln Schuster. Three were of history: *The American Historical Scene*, by Stanley Arthurs and fifty authors; *The Story of America in Pictures*, by Alan C. Collins; and *Lincoln in Portraiture*, by Rufus Rockwell Wilson. The U.S. Navy was presented in *Men and Ships of Steel*, by Wayne Francis Palmer. Katherine Mayo published *The Face of Mother India*. Wendell MacRae's *Willingly to School* showed educational processes.

Poetry. C. Day Lewis, the latest young English sensation, published *Collected Poems* and *A Hope for Poetry* and *A Time to Dance*. William Butler Yeats, of the Old Guard, matched him with *A Full Moon in March* and *The King of the Great Clock Tower*. Edwin Arlington Robinson's posthumous book was *King Jasper*, and AE's *Selected Poems* appeared after his death. Robinson Jeffers' *Solstice and Other Poems* were on his familiar themes. Merrill Moore's *Six Sides to a Man* were psychological sonnets. Laurence Whistler's *Four Walls* won a prize in England. William Rose Benét's *Golden Fleece* was his collected verse. Horace Gregory's *Chorus for Survival* added to his reputation. Good light verse was found in *Death and General Putnam*, by Arthur Guiterman; *The Primrose Path*, by Ogden Nash; and *Scenes from the Mesozoic*, by Clarence Day. John G. Neihardt continued his epic of the west in *Song of the Messiah*. Muriel Rukeyser's *Theory of Flight* brought in aviation. Others were: Mark van Doren's *A Winter Diary*; Lola Ridge's *Dance of Fire*; W. H. Davies' *Love Poems*; Winifred Welles' pleasant narratives, *A Spectacle for Scholars*; Edgar Lee Masters' *Invisible Landscapes*; Herbert Read's *Poems 1914-1934*; Kenneth Fearing's *communist Poems*; Joseph Auslander's *No Traveler Returns*; *Selected Poems of Marianne Moore*; *Selected Poems of Robert Nathan*; John Gould Fletcher's *XXIV Elegies*; Leonard Bacon's *The Voyage of Autoleon*; Conrad Aiken's *Landscape West of Eden*; MacKinlay Kantor's vernacular *Turkey in the Straw*.

Politics. If democracy fails, we shall have been warned by this year's books. Harold J. Laski gave the choice between democracy and capitalism in *The State in Theory and Practice*. Francis W. Hirst's *Liberty and Tyranny*; Sir John A. R. Marriott's *Dictatorship and Democracy*; Robert C. Brooks' *Deliver Us from Dictators!*; R. Bassett's *The Essentials of Parliamentary Democracy*;

C. Delisle Burns' *Democracy*; J. S. Fulton and C. R. Morris' *In Defence of Democracy*; all advocated democracy's retention. Lewis Broad and Leonard Russell studied *The Way of the Dictators*. And Rexford Guy Tugwell, in *The Battle for Democracy*, said the New Deal fought for it.

But Ogden L. Mills, in *What of Tomorrow?* attacked the New Deal from the right, as Mauritz A. Hallgren did from the left in *The Gay Reformer*. Harold L. Ickes' *Back to Work* described PWA; and H. G. Wells surveyed the New Deal's progress in *The New America—The New World*. Other American problems were considered in Edward S. Corwin's *The Twilight of the Supreme Court*; A. N. Holcombe's *Government in a Planned Democracy*; W. Y. Elliott's *The Need or Constitutional Reform*; Raymond Gram Swing's *Forerunners of American Fascism*; "Unofficial Observer's" *American Messiahs*; Frank H. Simonds' *America's Foreign Policy in the Post-War Years*; Charles Seymour's *American Neutrality 1914-1917*; J. T. Salter's *Boss Rule*; Drew Pearson and Constantine Brown's *The American Diplomatic Game*.

Against war were: *Mars His Idiot*, by H. M. Tomlinson; *The Power of Non-violence*, to create peace, by Richard B. Gregg; *Challenge to Death*, by fifteen British authors; *Peace and the Plain Man*, by Sir Norman Angell. But Frank H. Simonds and Brooks Emeny's *The Price of Peace* was eliminating nations' inequalities; and John W. Wheeler-Bennett's *The Pipe Dream of Peace* surveyed past peace manoeuvres cynically.

Everett Dean Martin's *Farewell to Revolution* attacked its utility. Harold D. Lasswell's *World Politics and Personal Insecurity* explained political change psychologically. *Labor and the Government* was edited by Alfred L. Bernheim and Dorothy van Doren. *The Foreign Policy of the Powers* was explained by an author from each nation.

About specific nations: Sidney and Beatrice Webb's *Soviet Communism*; George Selde's *Savdust Cacsar*, Mussolini; Herman Finer's *Mussolini's Italy*; Robert Sencourt's *The Genius of the Vatican* and George Selde's *The Vatican, Yesterday, Today, and Tomorrow*; Alexander Werth's *France in Ferment*; Ladislav Farago's *Abyssinia on the Eve*; Frederick L. Schuman's *The Nazi Dictatorship*; Lin Yutang's *My Country and My People*, and Grover Clark's *The Great Wall Crumbles*, about China; Nathaniel Pfeffer's *Must We Fight in Asia?* answering yes; and Lothrop Stoddard's *Clashing Tides of Color*, the machine versus racialism.

Religion. Bertrand Russell's *Religion and Science* located the battle ground. Corliss Lamont uncovered *The Illusion of Immortality*. Bernard Idings Bell defended the universal church in *Preface to Religion*. Paul Elmer More and Frank Leslie edited *Anglicanism*, an anthology of 17th century writings. A Christian view of the present world was presented in Henry P. Van Dusen's *God in These Times*. M. C. D'Arcy's *Mirage and Truth* attacked modern unbelief. Histories were: Christopher Dawson's *Medieval Religion*; Arthur Cushman McGiffert's *A History of Christian Thought*; Arthur C. Headlam's *Christian Theology*. Paul F. Douglass' *God Among the Germans* showed Nazis versus the churches. Louis Wallis' *God and the Social Process* was a sociological study of the Old Testament.

Science. Hans Zinsser's *Rats, Lice, and History* dealt with the social effects of typhus fever. Sir Arthur Eddington's *New Pathways in Science* led

him to philosophy again. Alexis Carrel's *Man the Unknown* speculated widely. H. S. Jennings' *Genetics* revealed its present standing. Gerald Heard's *Science in the Making* and Bernard Jaffe's *Outposts of Science* dealt with latest advances, while Jonathan Norton Leonard's *Tools of Tomorrow* showed what applied science might do. A. W. Haslett discussed *Unsolved Problems of Science*. J. W. N. Sullivan gave *Science: a New Outline*. John H. Bradley's *The Autobiography of Earth* was geology, while H. Spenser Jones' *Worlds without End*; E. A. Milne's *Relativity, Gravitation, and World Structure*; and Henry Norris Russell's *The Solar System and Its Origin* were astronomical. Sir J. A. Thomson published *Biology for Everyman*; Joseph Needham *A History of Embryology*. But seven British essayists, in *The Frustration of Science*, attacked its uses.

Short Stories. A notable first appearance was T. O. Beachcroft's *A Young Man in a Hurry*. Erskine Caldwell's *Kneel to the Rising Sun* dealt in bestiality and horror. Clemence Dane's *Fate Cries Out* was historical. Peter Neagoe's *Winning a Wife* was Rumanian. Booth Tarkington's *Mr. White, The Red Barn, Hell, and Bridewater* dealt with the after-life. James Thurber's *The Middle-aged Man on the Flying Trapeze* was burlesque. Others were: Thomas Wolfe's *From Death to Morning*; *Selected Short Stories of Sinclair Lewis*; Rebecca West's *The Harsh Voice*; Tess Slesinger's *Time: the Present*; Josephine Johnson's *Winter Orchard*; Oliver La Farge's *All the Young Men, Indians*; Thyra Samter Winslow's *My Own, My Native Land*; William March's *The Little Wife*; John O'Hara's *The Doctor's Son and Other Stories*.

Sociology. About America: Alfred M. Bingham's *Insurgent America*, what the middle class wants; Herbert Agar's *Land of the Free*, for small properties; Erskine Caldwell's *Some American People*; Alexander Micklejohn's *What Does America Mean?*; John L. Spivak's *America Faces the Barricades*, interviews; Charles Morrow Wilson's *Backwoods America*; Clarence Cason's *90° in the Shade, the South*; Stanley Walker's *Mrs. Astor's Horse*, New York; Caroline F. Ware's *Greenwich Village 1920-1930*. About race: Willis D. Weatherford and Charles S. Johnson's *Race Relations*; Zora Hurston's *Mules and Men*, Negro folk lore; Robert H. Lowie's *The Crow Indians*; Julian Huxley and H. C. Haddon's *We Europeans*, a scientific examination of the concept.

About crime: Courtney Riley Cooper's *Ten Thousand Public Enemies*; Henry Morton Robinson's *Science Versus Crime*; Fanny Alexander and William Healy's *Roots of Crime*; Lewis E. Lawes' *Cell 202*; Harry Soderman and John J. O'Connell's *Modern Criminal Investigation*. General works: Julian Huxley's *Science and Social Needs*; A. T. K. Grant's *Society and Enterprise*, workability of reforms; Walter Lippmann's *The New Imperative*, to combine industrialism and freedom; Graham Wallas' *Social Judgment*, the harmony of clear thought and warm feeling; Kenneth Burke's *Permanence and Change*, purpose of modern society; Leonard Woolf's *Quack! Quack!* what society encourages dictatorship; Huntington Cairns' *Law and the Social Sciences*; W. A. Robson's *Civilisation and the Growth of Law*; John Dewey's *Liberalism and Social Action*.

Travel. Anne Morrow Lindbergh's *North to the Orient*, by aeroplane with her husband, was a sensation. W. Somerset Maugham's *Don Fernando* was about Spain, as was Walter Starkie's *Spanish*

Raggle-Taggle. Admiral Richard E. Byrd reported his second Antarctic expedition in *Discovery*. Rockwell Kent described Greenland in *Salamina*. Ernest Hemingway went hunting in *Green Hills of Africa*. Christopher Morley visited Latin America in *Hasta La Vista*. Hugh Rutledge reported *Attack on Everest* and H. M. Tomlinson *Below London Bridge*. About Ethiopia: L. M. Nesbitt's *Hell-Hole of Creation*; C. F. Rey's *The Real Abyssinia*; Carleton Coon's *Measuring Ethiopia*. Raymond L. Ditmars and William Bridges took a *Snake Hunter's Holiday*. Ford Madox Ford felt at home in *Provence*. A. R. Glen's *Young Men in the Arctic* went to Spitzbergen. Histories were: *The Conquest of the North Pole*, by J. Gordon Hayes, and *The Exploration of the Pacific*, by J. C. Beaglehole. Vic Hurley homesteaded in the Philippines, *Southeast of Zamboanga*. Alice O'Reardon Overbeck found a home in the Andes, *Living High*.

LITHUANIA, lith'û-â-ni-â. A Baltic republic. Provisional capital, Kaunas (Kovno). Vilna, transferred to Poland by the Council of Ambassadors in 1923, was still claimed by Lithuanians in 1935 as their true capital.

Area and Population. The area of Lithuania is 21,482 square miles and the estimated population on Jan. 1, 1935, was 2,476,154. Included in these totals is the predominately German and semi-autonomous Klaipėda (Memel) district, with an area of 933 square miles and a population of 149,273 on Jan. 1, 1934. Births in 1934 numbered 60,770; deaths, 35,789; marriages, 18,246. The estimated populations of the chief cities on Jan. 1, 1935, were: Kaunas (Kovno), 104,038; Siauliai, 23,877; Panevėžys, 20,960; Klaipėda (Memel), 37,523. About 80 per cent of the people were Roman Catholics, 9.5 per cent Protestants, 7.3 per cent Jews, and 2.5 per cent Greek Orthodox.

Education. Illiteracy was reduced from 32 per cent in 1923 to about 20 per cent in 1935. Enrollment in primary schools in 1933-34 was 266,795; in secondary schools, 20,781; in the University of Vyntantas the Great at Kovno, 4277. There were also various special schools.

Production. About 77 per cent of the working population is engaged in agriculture and but 10 per cent in commerce, industry, and transportation. In 1932 there were 6,474,000 acres of arable land, 3,060,000 acres of meadow and pasture, 75,000 acres of garden, and 2,544,000 acres of forest. Crop production in 1934, with 1933 figures in parentheses, was (in thousands of units): Wheat, 10,475 bu. (8192); rye, 26,331 bu. (21,731); barley, 11,663 bu. (10,647); oats, 26,163 bu. (22,776); potatoes, 91,606 bu. (67,035); linseed, 1015 bu. (823); flax, 47,796 lb. (39,971). Livestock in 1934 included 1,315,000 cattle, 1,288,000 swine, 1,310,000 sheep, and 571,000 horses. In 1933 there were 1136 industrial establishments, employing 25,131 workers. The principal industries were the manufacture of matches (42,667,000 boxes in 1934), meat and fish products, timber and wood products, tissues and yarns, machines and metallic wares, and leather.

Foreign Trade. Imports in 1934 were valued at 138,700,000 lits (142,176,200 in 1933) and exports at 147,200,000 lits (160,227,400 in 1933). Of the 1934 imports for consumption, Germany supplied 28 per cent; United Kingdom, 25.3 per cent; Czechoslovakia, 6.6 per cent; and the United States, 2.9 per cent. The percentage of the total value of exports taken by the chief customers in 1934 was: United Kingdom, 42.6; Germany, 21.6; United States, 3.2; Czechoslovakia, 3.0. Iron and steel and their manufactures, machinery, wool cloth, cotton yarn, and

coal, coke, and briquets were the chief imports; bacon, butter, wood pulp, and flax fibre were the principal exports.

Imports in 1935 totaled 127,200,000 lits; exports, 153,400,000 lits. Imports from the United States were \$350,013; exports to the United States, \$372,496.

Finance. Budget returns for the calendar year 1935 placed receipts at 260,400,000 lits and expenditures at 276,900,000 lits. Actual receipts in 1934 were 257,598,000 lits; expenditures, 251,760,000 lits. The public debt on Jan. 1, 1935, amounted to 91,813,000 lits (internal, 1,699,000), compared with a total of 116,525,000 lits on Jan. 1, 1934. The lit (par value, \$0.10 to Jan. 31, 1934, and \$0.1693 afterwards) remained practically at par until Oct. 1, 1935, when the gold standard was abandoned. See *History*.

Communications. The railways in 1934 extended 1435 miles. During the same year they carried 4,020,000 passengers and 1,853,000 metric tons of freight, earning gross receipts of 30,457,000 lits. Highways extended 19,450 miles; navigable waterways, 1606 miles. During 1934 622,802 net register tons of shipping entered the port of Klaipeda (Memel) in the overseas trade (600,646 tons in 1933).

Government. In 1935 the government was still in the hands of a small nationalist intelligentsia, organized as the Tautininkai party (Nationalist Union), which seized power by the military coup d'état of 1926. The parliament (Seimas) was dissolved Apr. 17, 1927, and no new elections had been held since. On Dec. 16, 1933, the Tautininkai party adopted fascism as a governing principle. President in 1935, Antanas Smetona, reelected for seven years on Dec. 11, 1931. Premier and Minister of Finance, Juozas Tubelis.

HISTORY

The Memel Controversy. Relations between Lithuania and Germany reached the point of open hostility during 1935, largely as a result of the triumph of Nazi principles among the German population of the autonomous territory of Memel (q.v.) and the efforts of the Lithuanian Government to suppress Nazi propaganda there. The Lithuanian-German struggle for supremacy in Memel broke out in 1933 and became steadily more violent during 1934 (see 1934 YEAR BOOK, p. 387). Additional bitterness was injected into the conflict by the court-martial proceedings in Kaunas commencing Dec. 13, 1934, against 123 Nazis from Memel accused of conspiring to reincorporate Memel in Germany and of murdering George Jesutis, one of their members, for admitting his part in the "conspiracy" to Lithuanian officials.

The trial ended Mar. 26, 1935. Four of the alleged murderers were condemned to death; two others received life imprisonment; the two leaders of rival Nazi groups in Memel were sentenced to prison for from 8 to 12 years; and about 70 other persons received shorter sentences. The remaining defendants were acquitted. Throughout the trial there were frequent violent anti-Lithuanian demonstrations in the Reich. Troops were concentrated on both sides of the frontier, and economic relations between the two countries came almost to a standstill. The announcement of the verdicts inflamed German opinion still further. The officially inspired agitation in the Reich assumed such a menacing aspect that Britain, France, and Italy, in an effort to relieve the tension, formally warned

Lithuania that her repressive measures against the Memellanders were incompatible with the autonomous rights granted them by the Memel statute of May 8, 1924.

These warnings induced the Kaunas Government to moderate its severity. The Lithuanian Supreme Court on May 17, while upholding the sentences on appeal, reduced the terms and fines fixed for most of those convicted. On May 18 President Smetona commuted the four death sentences to life imprisonment. The Germans in the Reich and Memel continued to complain of violations of the Memel Statute, however, and on April 19 Britain, France, and Italy jointly requested Lithuania to reintroduce representative government in the territory. Lithuania on May 2 agreed to do everything possible in this direction. On May 11 Governor Kurkauskas of Memel Territory called new elections for the Memel Diet for September 29.

The promulgation on August 17 of new electoral laws designed to disenfranchise members of the Nazi organizations in Memel provoked another outburst in Germany. Chancellor Hitler joined with other high officials of the Reich in denouncing Lithuanian sovereignty in Memel as "legalized robbery" and in protesting the alleged "maltreatment and torture" of pro-Nazi Memellanders. Britain, France, and Italy on September 12 again warned Lithuania that the elections must be fairly conducted. They received satisfactory assurances from the Kaunas authorities, who invited them to send representatives to observe the conduct of the balloting. The fairness of the voting was amply demonstrated by the overwhelming victory of the Germans, who captured 24 out of the 29 seats in the Diet. The popular vote was: German candidates, 55,716; Lithuanians, 12,925.

The Kaunas Government, obviously chagrined at the outcome, attempted to retain control of the Memel Directorate, or executive board, by securing the appointment of one of the five Lithuanian members of the Diet as President. The refusal of the German deputies to accept such an arrangement, backed by a sharp warning from Great Britain, finally led the Lithuanian Government to capitulate. On November 28 August Baldiszus, leader of the German party, was appointed President and he named three other pro-Germans to the other seats on the Directorate, leaving the Lithuanians unrepresented. The restoration of self-government to Memel did little to ease German-Lithuanian hostility, however. As the year closed the Lithuanians were protesting to the powers guaranteeing the Memel Statute that the German Directorate was ousting all Lithuanian sympathizers from Memel public services and attempting to eradicate all evidences of Lithuanian sovereignty. The Germans, on the other hand, were aroused by a Lithuanian court ruling that office holders in Memel must speak both German and Lithuanian.

Observers of European diplomatic affairs in 1935 were convinced that Lithuania occupied a crucial position as the prospective battle ground between Germany, Poland, and the Soviet Union. They believed that Hitler's first move toward expansion in the East would be to crush Lithuania and that the Memel situation offered a convenient opening for such a thrust. Aware of their danger, the Lithuanian authorities made several moves during 1935 toward liquidation of their old dispute with Poland over Vilna, but no definite agreement was reported. Lithuania also joined Estonia and Latvia in two conferences, held at Kaunas and Riga, respectively,

at which steps were taken to strengthen political and economic ties among these three members of the Baltic Entente (q.v.). See ESTONIA and LATVIA under *History* for these negotiations. The small Baltic states, however, were relatively powerless from a military standpoint. The Lithuanians sought a more effective counterweight to the menace from the Reich through the development of closer relations with the Soviet Union.

Domestic Affairs. These threatening developments abroad had direct repercussions upon economic and political conditions in Lithuania. The modified dictatorship over which Premier Juozas Tubelis had presided since the coup d'état of 1926 had pursued a conservative and orthodox economic and financial policy in the face of the world economic depression. Vigorously opposing proposals for inflation and devaluation of the currency as a way out of the depression, the government had adhered to the gold standard even at the cost of drastic deflation. Deflationary measures aroused much discontent, especially among the farmers burdened by high taxes, imposed to balance the budget, at a time when low prices for farm produce had greatly reduced their income.

In 1935 the German market—traditionally the most important and most profitable outlet for Lithuanian agricultural produce—was practically closed as a result of tension over Memel and of the Nazi drive for economic self-sufficiency. At the same time Britain placed additional quota restrictions upon imports of Lithuanian bacon. In order to find new markets for the farm produce barred from Germany and Britain, the Lithuanian state-supervised cooperatives exported their products at still lower prices, further reducing farm income. Discontent among the farmers became increasingly vocal during the summer. The farmers refused to deliver their products to the cooperatives and in the Suvalkija district they engaged in violent demonstrations which were repressed by the police only after several persons were killed and scores arrested.

During September the growing exodus of capital led to the rapid decline of the gold reserves and on October 1 the government was forced to abandon the gold standard and establish rigid control over foreign exchange transactions. Heavy armament purchases abroad by the government in preparation for the expected German invasion, coupled with the loss of export markets and the emigration of Jews to Palestine, had proved too great a strain upon the country's financial structure.

In an effort to safeguard the economic structure and allay agricultural unrest, the government on February 5 established a far-reaching system for the control of prices. On September 6 a reorganization of the cabinet was effected in a further effort at checking criticism. New Ministers took over the Interior and Agriculture portfolios. On November 1 Col. Stasys Dirmantas was appointed Minister of Defense. On November 6 two political parties which had led the attack upon the government—the Peoples' Socialist and Christian Democratic parties—were suppressed. Meanwhile the army high command was reorganized, with Lieutenant-General St. Rastikis as commander, and a number of laws were promulgated tightening up the national defense system.

Before the end of the year additional farm relief measures had been placed in effect. Land taxes were reduced 10 per cent. Interest rates were lowered and the period for the repayment of loans was extended. New commercial treaties were concluded

with Latvia, Estonia, Finland, Belgium, the Soviet Union, Austria, and Czechoslovakia to provide additional outlets for Lithuanian farm products. Representatives of Lithuanian colonies in all parts of the world met in Kaunas during the autumn and took steps to promote economic collaboration between Lithuanians abroad and the mother country.

See GERMANY and POLAND under *History*.

LITTLE, ARTHUR D (EHON). An American chemist, died at Northeast Harbor, Me., Aug. 1, 1935. Born in Boston, Dec. 15, 1863, he was educated in the public schools there and in Portland, Me., and at the Berkeley School, New York, and the Massachusetts Institute of Technology (1881-84). In 1884 he became associated with the Richmond Paper Co., as a chemist and acquired a thorough knowledge of the details of paper-making by the sulphite process, subsequently installing the new process in mills in Wisconsin and North Carolina. In the following year he went to Boston as a consulting engineer, first with Roger B. Griffin, and later with Dr. William H. Walker. In 1905 he formed the business of Arthur D. Little, Inc., with himself as president, and four years later became a director of the Arthur D. Little Industrial Corporation.

One of Little's particular interests was the utilization of industrial waste. He specialized in the chemistry of cellulose fibres and paper-making, and in these, his chosen fields, was considered the foremost authority in America. So deeply concerned was he with the problems of paper-making that in 1912 he built a laboratory where he could experiment in paper-making and paper and pulp-mill operation. Later in his career he became interested in the development of chrome leather tanning, in the electrolytic manufacture of chlorates, in petroleum extraction, and in the manufacture of artificial silk, and he invented many processes in their connection. During the World War he devoted his time to experiments in connection with acetone production, smoke filters, and other supplies for the Signal Corps and Chemical Warfare Service.

When the Canadian Pacific Railway undertook the Natural Resources Survey in 1916, Dr. Little was its organizer. He served as chairman of the subcommittee on chemistry of the Science Advisory Committee of the National Research Council at the Century of Progress Exposition held in Chicago in 1933. Elected a fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and of the Chemical Society of England, Little was a member of the American Chemical Society (president, 1912-14); the American Institute of Chemical Engineers (president, 1919), and of the Society of Chemical Industry, London (president, 1928-29). He received many honorary degrees, and in 1931 was awarded the Perkin Medal of the American Chemical Society for his work in the fields of artificial silk and petroleum.

His publications included *Earning Power of Chemistry* (1911); *Industrial Research in America* (1914); *The Fifth Estate* (1925); *The Handwriting on the Wall* (1928).

LITTLE ENTENTE. The political and military alliance formed by Czechoslovakia, Rumania, and Yugoslavia in 1921 and 1922 and further extended and consolidated by the pact of Feb. 16, 1933 (see 1933 YEAR BOOK, p. 453). In 1934 two members of the Little Entente, Rumania and Yugoslavia, joined with Greece and Turkey in forming the Balkan Entente (q.v.). During 1934 and

1935 the Little Entente and Balkan Entente cemented their relations and tended increasingly to follow a joint policy in foreign affairs. See all of these states and AUSTRIA, BULGARIA, ETHIOPIA, FRANCE, GERMANY, GREAT BRITAIN, and POLAND under *History*.

LIVESTOCK. Outstanding in the livestock situation in 1935 was the unusually small supply of pork. Hog slaughter was the smallest for any year since 1910-11 and about 30 per cent less than last year. The inspected hog slaughter in the three summer months was the smallest for the period in more than 30 years. The decrease in pork supplies was reflected in an increased demand for beef and mutton.

Feed shortages due to the severe drought of 1934 were largely responsible for the decreased numbers and necessitated curtailment in the livestock carried during the fall and winter of 1934 to the lowest levels in years. The obligatory reduction in cattle and hogs reached a point where it was only possible to carry over a minimum number of foundation animals. The decrease of 7,600,000 head of cattle, including both dairy and beef, was the largest of any year on record. It was estimated in the spring of 1935 that the numbers of cattle on feed in the Corn Belt were 36 per cent less than in 1934.

The spring pig crop of 1935 in the United States was estimated at only 30,402,000 head, a decrease of 20 per cent over the small spring pig crop of 1934, and a decrease of 40 per cent over the spring pig crops of 1932 and 1933.

Hog numbers were not only low in the United States, but also in the importing European countries. The world shortage of pork raised meat prices to high levels, but with larger feed supplies available in the fall of 1935 there was evidence that the end of the decline in hog numbers had been reached. More favorable hog-feed price relationships occurred in the United States and Europe, and heavier farrowing was reported in the fall. With increased numbers of beef animals and hogs, meat prices declined in the winter to more normal levels, yet they continued considerably higher than in 1934.

In 1935, in the United States, range conditions were relatively poor at lambing time and feed production was low, resulting in heavy death losses and small lamb crops. Improved range conditions and increased feed production in the summer of 1935 probably increased the numbers of stock sheep in the western states. If not curtailed by grazing policies, inaugurated by the Grazing Administration of the Department of Interior under the Taylor Act for the control of grazing on the public domain exclusive of the National Forests, the trend in sheep numbers will probably be upward for several years.

Increased consumer-demand for meats in the late summer reacted especially on lamb prices, which advanced sharply, and prices of feeder lambs advanced more than slaughter lambs.

Although the production of beef in 1935 was about 10 per cent less than in the preceding year, it was nearly equal to the average production during the five-year period 1930-34. Nearly 15 per cent more mutton was slaughtered, but it was not sufficient to offset the low production of pork which was about 2,000,000,000 lb. less than in 1934.

During 1935 there were slaughtered under Federal inspection only 26,057,627 hogs as compared with 43,876,393 in 1934. About 1,500,000 more head of sheep were slaughtered, but the numbers of cattle and calves were reduced nearly 3 per cent to 9,665,840 and 5,679,399 head, respectively.

The harvest of feed crops during the year was

ample in relation to the numbers of livestock on hand, and pasture and range conditions were average or better.

On Sept. 1, 1935, there were only 324,785,000 lb. of pork in storage, which was only a little more than half of the five-year average holdings of pork on this date. Lard stocks on Sept. 1, 1935, totaling 53,716,000 lb. were compared with 167,155,000 lb. on that date in 1934, and 135,425,000 lb. for the five-year average. This situation reflected the shortage of pork products in particular, but meats in general. While it is difficult to obtain up-to-date data on per capita consumption of meats, it was estimated by the U.S. Bureau of Agricultural Economics that there was a decrease of about 20 per cent in total meat consumption during the first 12 months of the year as compared with 1934. This was due to reductions of 30 per cent in pork and 6 per cent in beef and veal, with an increase of nearly 12 per cent in the lamb and mutton consumed.

The long downward trend in horse and mule production appeared to be drawing to an end, and colt raising showed a sharp increase.

Heavy imports of dried eggs created considerable interest during the year. There were imported in 1935 a total of 601,925 lb. of dried whole eggs as compared with 1131 lb. during 1934. There were also large increases in the imports of dried yolk, dried albumen, and frozen yolks. The imports of these products amounted in 1935 to 3,952,664, 1,199,772, and 1,876,445 lb., respectively.

International Conditions. Ordinarily pork and lard are the principal livestock products entering into international trade from this country and therefore world hog production is of special domestic interest. American exports of pork products during 1935 amounted to less than half of those in 1934 and were smaller than for many years. The downward trend of recent years was accelerated by the restrictions on imports imposed by the importing countries taking the larger amounts of the American products, especially the United Kingdom and Germany. Reduced domestic supplies, largely resulting from the drought of 1934, following the attempts of the Agricultural Adjustment Administration to curtail pork production, together with the rapid increases in prices, were leading factors in bringing about the decline in American exports.

Lard exports of the United States showed a greater decrease than pork, declining from 431,237,367 lb. in 1934 to 96,354,609 lb. in 1935. The German market was practically closed to American lard through restrictions. Czechoslovakia ranked second only to Germany prior to 1930 as a Continental European consumer of American lard. However, trade agreements were made with nearby countries, and subsidies were offered to domestic producers to encourage domestic production. Belgium, The Netherlands, and other European countries imposed restrictions on imports of pork products.

In 1935, world hog numbers reached the lowest point in 9 or 10 years, and were the lowest in the United States that they have been for 50 years.

All classes of hogs, except brood sows, decreased in Germany in 1935 as compared with 1934, but an increase of 6 per cent in the number of bred sows, reported for farrowing in the fall, was expected to result in some increased pork production. Lard imports into Germany were only about half normal levels, due to import restrictions, unfavorable exchange, the fixing of maximum lard prices by legislation, forced substitution of other fats, and the

reduced American supplies from which Germany normally derives a large part of her lard. Over 65 per cent of the lard imported by Germany in 1935 came from Denmark. Bacon imports by Germany, which were also below those of the previous year, were largely from The Netherlands and Hungary. As a result of the small supplies of pork products, German import duties on live hogs and frozen pork were reduced to encourage the entry of additional amounts.

The British quota for imports of pork products continued in effect. For hams and bacon it was further restricted during the last quarter of the year by about 17 per cent as compared with 1934. To further encourage pork production in Great Britain there was some interest in subsidizing domestic production as in case of beef and lamb. The British market received considerably increased quantities of Canadian and New Zealand pork, and hog numbers in Great Britain increased from 3,507,000 head in June, 1933, to 4,526,000 in 1935.

Prior to 1934 the United States furnished over 90 per cent of the total lard imports of Great Britain, but in 1935 only a little more than half of the British lard imports were from this country. Unusually large quantities were received from the Danube Basin, Canada, Argentina, and other countries. Lard prices at Liverpool were more than twice as high as those prevailing in 1934.

Dependence upon Great Britain for a market for about 80 per cent of their pork in the form of bacon renders Denmark production particularly susceptible to British import policies. Hog marketing has been regulated for three years to meet the decreasing quotas by the aid of a hog census taken at frequent intervals. Bacon exports from Denmark amounted to 440,200,000 lb. during 1935 which was 11 per cent less than in 1934.

The Netherlands' hog production control programme also attempted to make hog marketing conform with British bacon import quotas. Hog numbers have declined so that in 1935 they were about half those of 1932.

In Switzerland where hog production has increased by 54 per cent in the last 10 years, the government established a production control programme for cattle, sheep, hogs, and poultry on Aug. 6, 1935, in order to bring livestock production into line with domestic feed production.

In recent years the United Kingdom absorbed approximately three-fourths of the world's beef exports. About half of the beef supplies of the United Kingdom are produced domestically with the nearly 9,000,000 head of cattle; whereas, the other half is imported chiefly as chilled beef from Argentina, Uruguay, and Brazil, and as frozen beef from Australia and New Zealand. From 15 to 20 per cent is received as live cattle from the Irish Free State. A programme of protection for the stimulation of domestic production was inaugurated in 1931 by means of tariffs, subsidies, and import quotas. The net result was a large increase in beef imports from Australia, Canada, New Zealand, Union of South Africa, and Rhodesia, where the chilled beef industry supplanted the production of frozen beef. Beginning Sept. 1, 1934, the British government paid a subsidy to home producers of beef of 5 shillings per cwt. on live animals, and 9 shillings 4 pence per cwt. on dressed carcasses. The subsidy was extended periodically, and finally continued to Oct. 31, 1936. It was expected that funds for the subsidy would be derived from a levy on imported beef.

Notwithstanding these conditions, New Zealand exported nearly three times as much beef from Oc-

tober to July, 1934-35, as during the corresponding period of 1933-34. Most of this went to the United Kingdom. Over 16,300 quarters of frozen beef and 24,474 bags of frozen boneless beef were sent to the United States in this period, against none in the previous year. The 1935 quota for beef and veal imports from Australia to the United Kingdom totalled 187,000,000 lb., which was a decrease of only 1 per cent over 1934 imports.

In Argentina there have been small increases for several years in beef exports, but there was a shift from frozen beef to canned beef. During the first 10 months of 1935 there was an increase of 18 per cent in the cattle slaughtered in Uruguay.

Cattle numbers in the European countries (Germany, France, Italy, and The Netherlands) reached high levels, and beef imports were below normal. According to the January, 1935, census of cattle in the Soviet Union, there was an increase of about 20 per cent in cattle numbers. Thus, practically all the major beef cattle-producing countries except the United States showed increases in beef cattle production in 1935.

Import restrictions on lamb and mutton similar to those on beef were applied by the British market. These limited imports from Australia and New Zealand. Exports of lamb from New Zealand, totaling 7,495,000 carcasses, were heavier than in 1934. The British quota for Australia was 207,000,000 lb. in 1935, an increase of nearly 14 per cent over 1934.

Research. The increased interest in stabilizing production to more closely approximate consumption needs makes more land available per unit of livestock fed, and consequently makes possible the utilization of greater quantities of pasture and roughage for the more economical production of all classes of livestock. As a result, more and more research was concerned with the nutritive values, including mineral and vitamin contents of pasture, forage crops, and hay. The calcium and phosphorus content of range plants was found by the New Mexico Agricultural Experiment Station to be low in certain areas of the state. This deficiency caused a high mortality in calves and retarded their growth. The Ohio Agricultural Experiment Station found that the vitamin G and B contents of alfalfa, clover, and timothy were correlated with leafiness, greenness, and protein content, and the amount of the vitamins decreased as the plant matured.

Many of the other State Agricultural Experiment Stations, and the U.S. Department of Agriculture, were engaged in studies of all phases of pasture problems, fertilization and care of pastures, and chemical studies of the pasture, range, and forage plants: digestibility and nutritive value of the plants for livestock; methods of management of livestock on pastures and ranges; and poison plants.

Special interest was aroused in animal breeding in connection with a survey of livestock herds and flocks by the U.S. Department of Agriculture to determine where superior livestock might be found that would breed relatively true for the superior qualities. While somewhat disappointing because of a lack of records to prove the transmission of the superior characters, the survey was especially valuable in calling attention to the importance of such records for livestock breeding operations.

The Russians made noteworthy advances in the practice of artificial insemination in livestock, although it may be considered still in the experimental stages. By the methods employed, superior rams have been used to fertilize several hundred ewes. Thus, the ram of special excellence may have a greater influence in improving the quality of the

breed. Some progress was also made in the United States and Canada on this problem, largely with dairy cattle and horses, but the method is especially well suited to Russian conditions of livestock production.

Changes in Personnel. Dr. H. C. McPhee, Senior Animal Husbandman in the Bureau of Animal Industry, was appointed Chief of the Division of Animal Husbandry of that Bureau, on January 1. Dr. E. W. Sheets was appointed Professor of animal husbandry at Mississippi State College of Agriculture.

Prof. J. L. Lantow, Head of the Animal Husbandry Department of the New Mexico Agricultural Experiment Station, resigned to engage in soil conservation work. He was succeeded by J. H. Knox, animal husbandman of the Texas Agricultural Experiment Station.

Necrology. Prof. James Dryden, a well-known poultry breeder and teacher, died on Feb. 5, 1935. Professor Dryden was connected, during his earlier life, with the Utah and Oregon Experiment Stations. He is generally credited with having produced the first hen to lay 300 eggs in a year, under official supervision, and the first hen to lay 1000 eggs in a lifetime.

L. Vinke, formerly animal husbandman at the Montana Agricultural Experiment Station, died on August 30.

W. H. Pew, manager of the Aberdeen Angus herd of Briar Cliff Farms, and from 1912 to 1918 Head of the Animal Husbandry Department of Iowa State College, died on September 26.

Bibliography. Among the more recent publications on various phases of livestock production may be listed the following: *American Society of Animal Production, Record of Proceedings of the Twenty-Ninth Annual Meeting, November 30-Dec. 1, 1934*, (Amer. Soc. Anim. Prod. Proc., 1935); *The Physiology of Domestic Animals*, by H. H. Dukes, with a chapter on "The Physico-Chemical Basis of Physiological Phenomena," by E. A. Hewitt, a part on "Reproduction," by G. W. McNutt, and a foreword by H. E. Bergman, (Ithaca, New York, 1935, pp. xiv + 643, figs. 169); *Reference Book on the Meat Packing Industry*, (Institute of American Meat Packers, Chicago, Dept. of Public Relations and Trade, Chicago, 1935); *Yearbook of the Horse, 1934*, (Ed. by R. F. Kelly, New York, Dodd, Mead, 1935); *Sheep Breeding and Wool Production in the Argentine Republic, Buenos Aires, 1934*, by P. Link, (New York, Macmillan, 1934); *World's Poultry Congress, 5th, Rome, 1933*, (Atti. Roma, Ministero dell' agricoltura e delle foreste, Direzione generale dell' agricoltura, 1934); *International Poultry Guide for Flock Selection for the More Popular Breeds and Varieties*, by L. F. Payne and H. M. Scott, (Kansas City, 1934); *Chickens*, by W. H. Kircher, (St. Paul, Minn., 1935); *Profitable Poultry Management*, by C. E. Lee, (Ed. 8, Cayuga, N. Y., 1935).

LODER, BERNARD CORNELIUS JOHANNES. A Dutch jurist, died at The Hague, Nov. 4, 1935. He was born in 1849 and received his degree at the University of Leyden in 1873. In that year he began the practice of law at Rotterdam, specializing in maritime and admiralty law. In 1908 he was appointed to the High Court of Justice of the Netherlands, a position he held until 1921.

Always interested in the law of the sea, he was one of the founders of the International Maritime Commission in 1896, and in the years 1905, 1909, 1910, and 1922 was a delegate to the diplomatic sea conferences as a representative of his Government.

He served as a member of the Netherlands delegation to the Paris Peace Conference which drafted the Treaty of Versailles in 1919, and, in the following year, on the Advisory Committee of jurists who met at The Hague to discuss the formation of a tribunal on the plans of the future World Court. On Sept. 14, 1921, he was elected a full member of the newly formed Court of International Justice (World Court), and on Feb. 3, 1922 was unanimously elected president for a period of three years. At the expiration of his term he refused the renomination because of his age. He resigned his judgeship in 1930.

Ever a peace advocate, Dr. Loder made every effort to substitute the conference table for the battlefield. It was his belief that the Permanent Court should be modeled on the lines of the Judicial Committee of the Privy Council in London. In March, 1923, he made a statement to *The New York Times* to the effect that American participation in the League would greatly enhance that tribunal's power. He served with distinction as president of the Conference of Neutrals in 1920, which organization proposed statutes for the Permanent Court of International Justice, and worked with Elihu Root in the carrying out of the plans.

In 1932 he became the first president of the International Federation of Journalists, a journalists' court of honor. Also, he was a member of the Permanent Court of International Arbitration and of the Council of the International Institute of Intellectual Coöperation.

LOEFFLER, CHARLES MARTIN TORNÖV. An American composer, died at Medfield, Mass., May 19, 1935. Born at Mulhausen, Alsace, Jan. 30, 1861, he studied the violin under Rappoldi and Joachim at Berlin and Massart and Léonard in Paris, and composition under Kiel and Guiraud. For a time he played with a private orchestra and subsequently with Padeloup's Orchestra in Paris.

Loeffler came to New York in 1881 and played there in orchestral concerts under Leopold Damrosch and Theodore Thomas. He joined the Boston Symphony Orchestra in the following year and from 1885 to 1903 shared the first violin desk with Franz Kneisel. That he might devote himself entirely to composition, he resigned this position. As a composer, his first work was a symphonic poem, *La Villanelle du Diable* (1889). This, and his early work, gave evidence of dependence on such masters as Wagner, Bach, Brahms, and Liszt, but subsequently he developed his own style which was held to be akin to that of D'Indy and Debussy by some critics, although others claimed that to classify his work with that of the French impressionists was inaccurate. His compositions were strongly imaginative and tended toward the mystical and idyllic. His most important work was *A Pagan Poem*, written for the orchestra and piano; this he rewrote three times before being satisfied.

His works included: *Divertimento* in A minor for violin and orchestra (1895); the symphonic poem, *The Death of Tintagiles* for orchestra and violé d'amore, after the marionette play by Maeterlinck (1897); *Divertissement Espagnol*, for orchestra and saxophone (1901); *Deux Rapsodies*, for oboe, viola, and piano (1901); *By the Waters of Babylon*, Psalm 137 arranged for female chorus (1902); *For One Who Fell in Battle*, a chorus in eight parts (1906); *Hora Mystica*, a symphony with music for four strings, written in memory of Victor Chapman who died in the early part of the World War (1916); *Memories of My Childhood*, a symphonic poem, which won \$1000 prize

of Chicago North Shore Festival (1923); *Fantastic Concerto* for orchestra and violoncello (1924); *The Canticle of the Sun*, by St. Francis of Assisi, arranged for voice and orchestra, which was commissioned and published by the Library of Congress (1925); *Evocation*, for women's voices and modern orchestra (1930); *Irish Fantasies* for tenor and orchestra (1933).

Mr. Loeffler was an officer of the Legion of Honor, a member of the National Institute of Arts and Letters and of the American Academy of Arts and Letters. In 1919 he was awarded the 11th gold medal of the National Institute.

LOMBOK. See NETHERLAND INDIA.

LONDON NAVAL CONFERENCE. See NAVAL PROGRESS.

LONG, HUEY (PIERCE). An American senator and politician, died, the result of an assassin's bullet, in Baton Rouge, La., Sept. 10, 1935. Born in Winfield, La., Aug. 30, 1893, he attended the local school, worked on his father's farm, and at the age of 16 sold books and other goods throughout the rural section of the State. He won a scholarship to Louisiana State University, but could not accept it because it only included tuition. Subsequently, he attended the University of Oklahoma for a short time, but it was not until 1914 that he gave thought to his future and entered the Tulane University law school. He completed the three year course in seven months and persuaded the bar committee of the Supreme Court to give him a special examination for admittance to the bar. He was sworn in on May 15, 1915, and first practised at Winfield, but not being successful, went back to selling. In 1918 he settled at Shreveport and specialized in constitutional law.

His first political office was as a State Railroad Commissioner, and as plaintiff, witness, and counsel, was successful in his case of *Long v. the City of Shreveport* in a suit to reduce the transit fare to 5 cents, and thus began his long warfare against public utilities and the large oil companies. In 1921 he was elected to the State Public Service Commission, an outgrowth of the Railroad Commission, and two years later he became its chairman, and as such, prevented an increase of telephone tariff rates, was upheld by the Supreme Court, and succeeded in equalizing the grain rates for New Orleans.

He ran for Governor of the State in 1924 but was unable to defeat the powerful political groups of the State. He did, however, make a surprisingly fine showing, and four years later ran again, this time being elected. His administration was marked by turmoil and conflict, which terminated in his impeachment in 1929 on charges of bribery, misappropriation of State funds, and incitement to assassination. He was brought to trial on May 14, 1929, but his forces moved for an adjournment of the Senate *sine die*, and as the anti-Long group was unable to rally quickly enough, the forced adjournment ended the trial. Six months later proceedings were *nolle prossed*.

Cleared of these charges, Long firmly entrenched himself in the State by the establishment of a strong political machine. His influence with the rural voters was strong, both because of his early contacts with them and his emphasis on legislation affecting them, and their votes succeeded in keeping him and his machine in power. Under his rule varied public improvements were made, although the State's indebtedness was increased by \$85,000,000. New roads were built where none had been before; illiteracy was reduced by the establishment of night

schools, and providing text books free to children; a new State capitol was built; Louisiana University provided with a new medical building, and funds were obtained for a bridge to cross the Mississippi River at New Orleans.

Unable to succeed himself as Governor, Long now saw himself in the toga of a Senator, and in 1930, with the aid of his strong political organization, was nominated and elected. After his election, in order to prevent the lieutenant-governor, Paul Cyr, a political opponent, from becoming the governor, he refused to relinquish his seat, and appointed Alvin O. King as his successor. To enforce this appointment and to make sure that Cyr did not usurp his power he called out the National Guard. Not until Jan. 25, 1932, did he take his seat in the Senate, when his candidate, O. K. Allen was elected Governor.

As a senator, his tactics did not change. He would not follow Democratic leadership and filibustered for eight hours against the Glass Banking Bill. He repeatedly advocated the redistribution of wealth and the confiscation by the government of fortunes of more than \$5,000,000 left at death. At the Democratic convention of 1932 he supported Franklin D. Roosevelt, and in the election of that year supported John H. Overton as junior senator from Louisiana. After the election, sensational charges were made of coercion, bribery, and intimidation, and a Senate committee investigated but its findings were inconclusive.

Each year Long continued to strengthen his hold on the political fortunes of his State, but in 1934 suffered his first setback in the defeat of his candidate for Mayor of New Orleans by T. Semmes Walmsley. However, in the State primary elections, held later in the year, his candidate defeated the Walmsley ticket. He called out the National Guard in 1935 to protect him against threats of assassination, established martial law, and when it was lifted in July had complete control over Louisiana. Taxes, education, and every officeholder were under his domination, and municipal government was practically abolished. Upon the adjournment of the 74th Congress, August 27, he returned to attend the special session of the Louisiana Legislature to rush through bills giving him still more power. He obtained control of the State's election machinery; restrained the authority of the civil court; established a secret police, and won the right to call out the militia at any time and in any way he chose without interference.

In regard to national politics, he was in open rebellion against the Administration and did all in his power to hinder the President's plans. In punishment thereof, Louisiana was deprived of Federal patronage, and Long, in the closing days of the 74th Congress, retaliated by filibustering for 15 hours against the President's Deficiency Bill, which carried the appropriations for the Social Security programme, considered one of the most important of the Administration measures. His Share-the-Wealth Club movement, his strength in Louisiana, his growing interest in the political affairs of neighboring States—in 1933 he went in to Arkansas to assist in the reelection of Senator Hattie Caraway, his avowed intention of supporting a third party candidate in opposition to President Franklin Roosevelt, and his own White House aspirations made him a power to be reckoned with in the 1936 elections.

On September 8, as he was coming from a session of the Louisiana Legislature in the Capitol, Long was shot and seriously wounded by Dr. Carl

A. Weiss, Jr., who in turn was slain by Long's bodyguard. Two days later Senator Long died.

Since 1933, Senator Long published his own newspaper *The American Progress*, and was the author of *Every Man a King*, published privately in 1933. He issued millions of pamphlets to voters throughout his State concerning legislation. See LOUISIANA under *Political and Other Events*.

LORAINÉ, ROBERT. An English actor, died in London, Dec. 24, 1935. Born at New Brighton, Cheshire, Jan. 14, 1876, he was educated at the New Brighton high school. His first appearance on the stage was made in *The Armada* (1889), playing in the provinces. He made his début on the London stage in 1894 as Alfred Durncombe in *The Ne'er-do-Well* and played such other rôles as de Mauprat in the first act of *Richelieu* at the Criterion, July, 1895, on the occasion of his father's benefit; Tom in *The Prisoner of Zenda* (1896); Captain Hentzau in *The Prisoner of Zenda* (1897); Claudio in *Much Ado About Nothing* (1898), and D'Artagnan in *The Three Musketeers* (1899). At the outbreak of the Boer War in that year, Lorainé forsook the stage for the battlefield and served for two years with a machine guns corps, receiving the Queen's medal with three clasps.

After the War he came to America and made his first appearance in New York on Mar. 4, 1901, in *To Have and To Hold*. Returning to England he played in a revival of *Henry V* (1902). After playing several rôles he again came to America in 1903 and toured with Grace George in *Pretty Peggy*. He opened as John Tanner in *Man and Superman* in New York, Sept. 5, 1905, and so great was his success that for two years that was his only rôle. He brought this play to London in 1907, and subsequently played in *Arms and the Man* (1907); *Bellamy the Magnificent* (1908); *She Stoops to Conquer* (1909); *The School for Scandal* (1909); *The Rivals* (1910); and *Much Ado About Nothing* at Stratford-on-Avon (1910). Until 1911 he played varied rôles when he leased the Criterion Theatre and started on his career as a manager, first offering a revival of *Man and Superman*, Sept. 28, 1911, he himself playing John Tanner. Previous to this he had become attracted by the romance of the aeroplane, and in 1910 was one of the most daring of England's aeronauts, being the first to make a flight across the Irish Sea, Sept. 11, 1910.

After 1912, he again revived *Man and Superman* and brought the play to America. Subsequently, he returned to London, appearing in *A Place in the Sun* (1913) and *The Tyranny of Tears* (1914). At the entrance of England into the World War he joined the Royal Flying Corps and served until 1918, being twice seriously wounded. He received the Military Cross for conspicuous gallantry and skill; was made a Companion of the Distinguished Service Order, and was mentioned in dispatches six times. At the Armistice he retired as Lieutenant-Colonel.

The stage called him again, and in 1919 in Edinburgh he opened in *Cyrano de Bergerac*. Later in the month the play was brought to London, and in order to keep it running he took over the management of the Drury Lane Theatre, and subsequently the Duke of York's Theatre. In December he appeared again in *Arms and the Man*, and in 1920 was seen in *Mary Rose*, afterward playing varied rôles. In 1923 he again appeared in *The Prisoner of Zenda*, playing the parts of Rupert Rassendyle and King Rudolf. In the following year he played a revival of *The Way of the World*, and also ap-

peared in *Tiger Cats*, which he brought to America. Returning to London for a short time, he again returned to New York, playing in *The Man with a Load of Mischief* (1925). There he remained until 1926 when in the fall he returned to London and played in a revival of *Arms and the Man*. In 1926 he played Petruchio in *The Taming of the Shrew* for the Fellowship Players, and for the same organization appeared as Mercutio in *Romeo and Juliet*. In 1927 he was lessee of the Apollo Theatre, and appeared in *Othello* (1927); *Cyrano de Bergerac* (1927); *The Man Who Changed His Name* (1928). Among the productions in which he was last seen on the New York stage were: Strindberg's *The Father* (1931); O'Neill's *Days Without End* (1934) and *Times Have Changed* (1935). Lately he had appeared in motion pictures, notably in *S.O.S.*, and *Birds of Prey*.

LOUIS, JOE. See BOXING.

LOUISIANA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,101,593; July 1, 1934, by latest Federal estimate, 2,166,000; 1920 (Census), 1,798,509. New Orleans had (1930) 458,762 inhabitants; Baton Rouge, the capital, 30,729.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1935	1,230,000	555,000*	\$30,580,000
	1934	1,160,000	485,000*	30,195,000
Sugar cane	1935	258,000	4,486,000 ^b	14,875,000
	1934	249,000	3,735,000 ^b	9,326,000
Rice	1935	382,000	16,808,000	10,589,000
	1934	394,000	15,957,000	13,085,000
Corn	1935	1,367,000	23,922,000	15,549,000
	1934	1,354,000	16,248,000	14,786,000
Sweet potatoes ..	1935	88,000	6,512,000	3,907,000
	1934	80,000	5,840,000	4,322,000
Hay (tame)	1935	218,000	279,000 ^b	2,483,000
	1934	204,000	269,000 ^b	2,771,000
Potatoes	1935	42,000	2,856,000	2,285,000
	1934	44,000	2,948,000	2,093,000

* Bales. ^b Tons.

Mineral Production. The production of petroleum rose to a total quantity of 32,294,000 barrels for 1934, exceeding the total for 1933 by 28 per cent. The gain occurred chiefly in the coastal district, which yielded 23,249,000 barrels, or more than 50 per cent above the district's production for 1933. The output of 1934 for the State fell little short of that for 1920, the record year, as to quantity.

The production of natural gas increased to 227,920,363 M cu. ft. for 1934, from 193,202,465 M for 1933. The Monroe and Richland areas led in yield of natural gas, but the Rodessa and Sligo fields increased their proportions of the State's production. Gas was derived from 26 distinct areas in all. Much of the product passed into pipe lines for distant consumption by customers of utilities, but 51,333,382 M cu. ft. were burned to yield 67,026,665 lb. of carbon black, and 63,000,880 M were treated to yield gasoline, producing 32,835,573 gallons.

Sulphur was produced in 1934 to the quantity of 229,830 tons, considerably less than the 321,492 tons of 1933, the year when the industry was resumed in the State on a big scale. The Freeport Sulphur Company furnished 153,362 of the total for 1934 from its plant at the salt dome of Grande Ecaille. The production of salt in the State increased to 567,289 short tons (1934) from 532,569 (1933), and in value to \$2,854,785 (1934) from \$2,345,208 (1933).

Education. Of some 400,000 white and 263,170 Negro inhabitants reckoned as of schoolgoing age, there were enrolled in the public schools, in the

academic year 1934-35, 296,029 whites and 172,621 Negroes. Among the whites 230,598 were enrolled in common schools or elementary grades and 65,431 in high schools; among the Negroes, 163,033 and 9588, respectively. The year's expenditure on public-school education, for white pupils, totaled \$13,298,871; for Negro pupils, \$1,740,063. Salaries of teachers averaged \$850.43 in the white group; in the Negro group, \$274.25.

Under Long's followers the government of the State not only greatly increased its authority over the public schools (see *Events*, below) but augmented the State's aid to the schools' support. State supervisors were set up, to start Statewide instruction in music, health, and physical education.

Charities and Corrections. The State's central administrative function with regard to institutions for the care and custody of persons was performed, under the laws in effect in 1935, by a Board of Charities and Corrections. The Governor, as chairman *ex officio*, and five other members composed this Board. Its authority over the State institutions was supervisory and did not extend to their management, which was conducted by separate respective bodies. The State Board was vested also with authority to visit privately maintained eleemosynary institutions, with supervision of the juvenile courts, and with the authority to approve or disapprove proposals of adoption.

The State institutions were: the Penitentiary, at Angola; Boys' Industrial School, at Monroe; Industrial School for Girls, at Alexandria; State hospitals for the insane, at Pineville and Alexandria; Milne Home for Destitute Girls, at New Orleans; Greenwell Springs Tubercular Hospital, at Greenwell Springs; State Colony and Training School for the Feeble-Minded, at Alexandria; Charity Hospital (general), New Orleans; Charity Hospital (general), Shreveport; School for the Blind (white and colored) and School for the Deaf (white and colored), both at Baton Rouge.

Legislation. The Legislature was called four times into special session to enact bills under the dictation of Huey Long. In February it put the police and fire departments of New Orleans under the control of State officials and enacted a compromise that Long had made with the Standard Oil Company on the previously imposed tax on petroleum. In April it required that all loans made by the PWA to localities in the State be handled through the Governor and the State Tax Board, gave the Governor power over all election machinery through the State's appointment of election boards, and required municipalities to obtain the State's approval before they might make compositions on their debts through proceedings in the Federal courts. In July the State was empowered to collect taxes in New Orleans, to control the employment of persons in that city's service, to rule on the employment of all teachers in the State, and to disregard the legal restrictions reserving the use of public funds for specific purposes. It was made a criminal offense, punishable by imprisonment, to employ Federal funds within the State for political purposes. The State was empowered to appoint the assistants of the (hostile) District Attorney of the Parish of Orleans. Sheriffs were discouraged, by an indirect restriction, from appointing deputies unsatisfactory to the State administration.

In September a session that assembled just before the assassination of Long enacted after his death a series of measures that he had sought. These included the creation of an offense, punish-

able by prison, consisting of the performance by a Federal employee of any act in violation of the Federal Constitution; the gerrymandering of an anti-Long judicial district; and provision for the release of State-collected taxes of New Orleans, to meet payrolls, through a designated body.

Political and Other Events. The year's chief occurrences were for the most part connected with Long's dictatorial control of the State, his death, and the ensuing strife to succeed him.

Long's Death. Huey Long (q.v.) was shot on September 8 as he left the Representatives' chamber in the State Capitol. Hit in the abdomen by a pistol bullet, he died on the 10th. His assassin was Dr. Carl A. Weiss, Jr., of Baton Rouge, son-in-law of Judge B. H. Pavy of the faction opposed to Long; it was this judge whose district was to be gerrymandered by a bill then pending (see *Legislation*, above).

Long was buried in the grounds of the Capitol with public ceremonies that drew some 100,000 people. The report that 80,000 viewed his body before the burial indicated the strength of the popularity that he had gained, mainly among the debt-ridden country people.

Long had asserted early in the year that he knew of a plot of political opponents to end his life and declared that two attempts had been made. His charge had been investigated by the Legislature. Some of his partisans sought after his death to fix the guilt of participation on plotters Weiss, the assassin, was riddled with bullets, in the very act of shooting, and died on the spot, without making a statement.

Opposition to Long. At the time of his death Long held greater power in his State than he had ever possessed before. Without formal authority over the Legislature or the State administration, he possessed the influence to dictate the passage of laws and the Governor's policy and acts. During much of the time when the Legislature was in session he was present in the Legislative chambers, directing the progress of his bills. The opposition were too few to offer any serious obstacle. The compliance of Governor Allen rendered Long, in virtue of Long's own laws, the master of thousands of public servants, of the system of elections, and of the affairs and moneys of the chief municipalities. He nevertheless had to face serious opposition in several directions. The State Supreme Court was not all his, the Federal courts in the State would not do his bidding, Mayor Walmsley of New Orleans clung to office, and the Federal Administration took a number of steps to Long's detriment.

The State Supreme Court bench included three Justices regarded as unwilling to do as Long wished. He threatened to have the Legislature impeach them, but this plan was announced in April to have been left in suspense, for possible later application. A Federal three-judge court at New Orleans ruled on March 22 that the State's tax of 2 per cent on the advertising carried by newspapers transgressed both State and Federal constitutions; and on August 30, that the act imposing certain rates at which pensions must be paid under employers' systems of voluntary pensions was also unconstitutional.

On a petition of one of Long's followers a friendly judge put the City of New Orleans under injunction on January 5 not to pay out any further moneys, save for interest on bonded debt. There followed legislative acts turning the city's taxes over into the State's hands and giving the State

power of appointment and removal over the city's servants, the direction of the police, and the payment of municipal salaries. These measures caused some of Mayor Walmsley's own supporters to press him to resign, but this he refused to do. An effort of Long's to promote mass meetings to ask Walmsley's removal failed.

The Federal Government provided funds in June, out of the "works progress" appropriation, to pay some 1200 employees of New Orleans. The PWA gave notice at various times that allotments made in Louisiana for works not yet started and even for works in progress would be canceled in view of adverse State legislation. Allies of Long were prosecuted in the Federal courts for alleged violations of the Income Tax Law, and State Senator Joseph Fisher, one of these, was sentenced to 18 months in prison.

Some of Long's opponents offered armed opposition to his rule, but it was scattered, casual, and scarcely formidable. A shutdown of the Standard Oil refinery at Baton Rouge at the beginning of the year, in response to the imposition of a State tax on petroleum, roused local sentiment. Some 200 men armed with shotguns seized the court house of East Baton Rouge Parish on January 25, but dispersed a few hours later. On the 26th National Guards awed about 100 armed men at Baton Rouge into surrender. The trouble at Baton Rouge was ended by a compromise over the tax on petroleum.

While no allegations of financial criminality were made against Long himself, it was reported, and he personally stated in the U.S. Senate, that he had received considerable emolument for acting as a special attorney of the State in making settlements with companies owing taxes in arrears. He was also retained by the Public Service Commission of the State in inquiries into public utilities' rates, conducted at the companies' expense.

Struggle for Succession. Upon Long's death in September, the Rev. G. L. K. Smith, one of his foremost followers, came forward as the leading advocate of the "share the wealth" movement that Long had originated. Smith, however, was reported to have been forcibly restrained from addressing a popular outdoor meeting on September 22, at Monroe, and Lieut.-Gov. James A. Noe then presented himself as candidate for Governor, to run in the primary of January, 1936. Later both Noe and Governor Allen were reported to have withdrawn in favor of Richard W. Leche. Representative Cleveland Dear was put forward as the old anti-Long group's choice for the candidacy.

Shipping was hindered at New Orleans in October, and numerous outbreaks of violence occurred, in the course of the strike of unionized longshoremen in the Gulf ports.

Officers. The chief officers of the State, serving in 1935, were: Governor, Oscar K. Allen; Lieutenant-Governor, James A. Noe; Secretary of State, E. A. Conway; Treasurer, J. S. Cave; Auditor, L. B. Baynard; Attorney-General, L. G. Porterie; Superintendent of Education, T. H. Harris.

Judiciary. Supreme Court: Chief Justice, Charles A. O'Neill; Associate Justices, John B. Fournet, A. T. Higgins, W. G. Rogers, John H. Land, H. F. Brunot, Fred M. Odom.

LOUVRE EXPEDITION. See ARCHÆOLOGY.

LOYALTY OATH. See EDUCATION IN THE UNITED STATES; MASSACHUSETTS; UNIVERSITIES AND COLLEGES.

LÜBECK. See GERMANY under *Area and Population*.

LUKEMAN, (HENRY) AUGUSTUS. An American sculptor, died in New York City, Apr. 3, 1935. Born in Richmond, Va., Jan. 28, 1871, he received his training at the National Academy of Design and Cooper Union, and later studied at the École des Beaux Arts in Paris under Falguière. Following his return to the United States, he became associated with the studio of Daniel Chester French, but also executed commissions of his own.

Lukeman's work was characterized by virility, individuality, and breath-taking size. He specialized in figures of heroic stature, of which his first were "Peace" and "Power" exhibited at the Buffalo Exposition in 1901. Also, at the St. Louis Exposition in 1904, he exhibited figures representing "Music," "Speed," "Heat, Power, and Light." Other of his works were four colossal marble statues for the Royal Bank Building, Montreal; four colossal statues for the Brooklyn Institute; War Memorials at Pittsfield, Mass., and Wilmington, Del.; the Masonic War Memorial, Elizabethtown, Pa.; Soldiers' Monument, Somerville, Mass.; Women of the Confederacy Monument, Raleigh, N. C.; U. S. Grant Memorial, San Diego, Calif.; Franklin Pierce Monument, Concord, N. H.; Straus Memorial Fountain, New York, and statues of Prof. Joseph Henry, Princeton University; Kit Carson for Trinidad, Colo.; Francis Asbury for Washington, D. C., and Drew Theological Seminary, Madison, N. J.; General Gregg, Reading, Pa.; Columbus, Custom House, New York; Gen. J. Z. George and Jefferson Davis for Statuary Hall, Washington, D. C.; heroic bas-relief portrait of Daniel Boone for Paris, Ky.; portrait statue of Elisha Yale for Gloversville, N. Y.; heroic bronze portrait statue of James Kennedy Patterson, first president of the University of Kentucky, for Lexington, Ky.—his last sculptural work.

In 1925, he was appointed to succeed Gutzon Borglum as sculptor of the Stone Mountain Memorial to the Confederacy. Scrapping most of Borglum's work, he set out to carve, on a mountain 3000 ft. long and 900 ft. high in De Kalb Co., Georgia, a panoramic scene giving honor to the commanders of the Confederacy during the Civil War. In the lead were Generals Lee and Jackson and President Jefferson Davis followed by the color bearers and other officers. The effect to be given was a review of the army by the commanders. On Apr. 9, 1928, the first completed part of this great work was unveiled by Mayor James J. Walker of New York at Richmond, Va. Financial troubles brought the project to a halt and for several years before his death Mr. Lukeman had done no work on the mountain.

LUMBER. See FORESTRY.

LUTHERAN CHURCH. A church that expresses itself in groups of religious bodies and synods that receive and hold the canonical Holy Scriptures of the Old and New Testaments as the inspired Word of God and the only infallible rule and standard of faith and practice and that declare the unaltered Augsburg Confession to be a correct exposition of the faith and doctrine of the Evangelical Lutheran Church. The membership of the church, while found chiefly in central and northern Europe and in the United States and Canada, is distributed throughout the world, there being in 1935 a total of about 83,000,000 members in 75,000 congregations, served by more than 50,000 pastors.

In the United States, as the result of mergers

and the formation of federations, the Lutheran Church expresses itself in practically a threefold equal division in the United Lutheran Church in America, the American Lutheran Conference (consisting of the American Lutheran Church, the Augustana Synod, the Norwegian Lutheran Church, the Lutheran Free Church, and the United Danish Church), and the Synodical Conference (consisting of the Missouri Synod, the Joint Wisconsin Synod, the Slovak Synod, the Norwegian Synod, and the Negro Missions). In addition there are the following minor religious bodies: Eielsen Synod, Church of the Lutheran Brethren, Danish Church, Icelandic Synod, Finnish Suomi Synod, Finnish National Church, Finnish Apostolic Church, and a number of non-synodical or independent congregations.

Third Lutheran World Convention. This convention with delegates from 22 countries met from Oct. 13 to Oct. 20, 1935, in St. John's Lutheran Church, 147 rue de Grenelle, Paris, France. Among those present as delegates were distinguished Lutheran archbishops, bishops, presidents, superintendents, and church leaders.

The executive committee was elected as follows: Bishop August Marahrens, Hanover, Germany; Bishop Hans Meiser, Munich, Germany; with alternates Dr. Carl Ihmels and Prof. Dr. E. Sommerlath, Germany; Dr. Alfred Th. Jorgensen of Copenhagen and Dr. Per Pehrsson of Gothenburg, Sweden, with Prof. Dr. Olaf Moe of Norway and Bishop Max von Bonsdorff of Finland as alternates, Drs. F. H. Knubel and Ralph H. Long of New York, N. Y., with Dr. A. R. Wentz of Gettysburg, Pa., and Dr. L. W. Boe of Northfield, Minn., as alternates. This executive committee organized itself with Bishop August Marahrens as president, Dr. F. H. Knubel as first vice-president, Dr. Per Pehrsson as second vice-president, Bishop Hans Meiser as secretary, Dr. Alfred Th. Jorgensen as treasurer, and Dr. Ralph H. Long, as assistant treasurer.

Statistics. The statistics for 1934-35 for the United States and Canada were as follows: Pastors, 11,996; congregations, 16,646; baptized membership, 4,624,134; confirmed or communicant membership, 3,127,765; communing membership, 2,522,706; church schools, 21,001; officers and teachers, 200,578; scholars, 1,909,433; value of church property, \$360,189,022; congregational expense, \$32,044,644; congregational benevolence, \$7,347,557; total expenditures, \$39,392,201. In 1935 in the United States and Canada the Lutheran Church maintained 25 seminaries, 29 colleges, and 62 junior colleges, academies, and schools, with a total enrollment of 18,571 scholars, 1491 instructors, endowment amounting to \$15,717,497, and property value of \$50,922,489.

Education. In the field of Christian higher education practically all the larger Lutheran Church bodies and groups have initiated a re-study of curriculums looking toward revision. A Lutheran education seminar was held in the summer of 1935 at the University of Minnesota under the auspices of the Committee on Higher Education of the American Lutheran Conference and under the direction of Dr. O. H. Pannkoek. This was followed by a conference for Lutheran seminary and college teachers at St. Olaf College, Northfield, Minn., during the Thanksgiving vacation in November at which most of the Lutheran colleges of the Middle West were represented and a Lutheran Higher Education Institute was organized. There has also been projected a Luther Academy of Religion and

Life which will hold its meeting in the summer of 1936 at the Wartburg Seminary in Dubuque, Iowa.

Missions. Lutheran inner mission institutions such as deaconess' homes, hospitals, old people's homes, orphanages, immigrants' and seamen's homes numbered 425 with an endowment of \$6,611,801 and a property value of \$52,123,495. During the year they sheltered, cared for, and ministered to 8318 children and 1,131,334 men and women, at an annual expense of \$12,397,329. In addition to the institution work, congregational and society inner mission work was done at an expense of approximately \$10,000,000.

The United Lutheran Church, through its Board of American Missions, aided 579 parishes, 656 congregations, 576 missionaries and workers, a confirmed membership of 111,644, a Sunday school membership of 85,030. The appropriations made by the board for salaries were \$313,502; its loans for church extension came to \$1,646,667. Contributions by congregations aided totaled \$1,192,687 for current and unusual expenses and \$146,047 for benevolences. The American Lutheran Conference and the Missouri Synod carried forward their home mission work during 1935 without regression, in 2865 congregations and preaching stations by 1672 pastors and workers.

The work of the American Lutheran churches in fields outside the United States and Canada was carried on principally in India, Africa, Japan, China, New Guinea, Argentina, and British Guiana, in charge of 376 pastors serving 2870 congregations and missions. These had 293,489 baptized members, 140,731 confirmed members, 137,871 communing members, 3411 schools, 1402 officers and teachers, 145,473 scholars. The property value was \$4,387,250; local congregational expenses, \$17,693; benevolence, \$349,906; and total congregational expenditure, \$367,599. The income of the various foreign mission boards was \$1,348,228; the expenditures were \$1,266,935.

Publications. The church maintains 25 publishing houses, with a total property value of \$5,663,798. The official periodicals are: *The Lutheran* (United Lutheran Church), *Lutheran Standard* (American Lutheran Church), *Lutheran Companion* (Augustana Synod), *Lutheran Herald* (Norwegian Lutheran Church), *Lutheran Witness* (Missouri Synod), *Northwestern Lutheran* (Wisconsin Synod), *Ansgar Lutheran* (United Danish Church), *Lutheran Men* (American Federation of Lutheran Brotherhoods), and *National Lutheran* (National Lutheran Council).

Headquarters. The headquarters of the National Lutheran Council, in which the United Lutheran Church in America and the American Lutheran Conference cooperate, are at 39 East 35th Street, New York City, the executive director being the Rev. Ralph H. Long, D.D.

LUXEMBURG, lük'sem-bürg. A grand duchy adjoining Belgium. Area, 999 sq. miles; population (Jan. 1, 1934), 302,596. The birth rate for 1934 was 11.6 per 1000. Chief towns: Luxembourg (capital), 53,791 inhabitants in 1931; Esch-sur-Alz, 29,429; Differdange, 17,567; Dudelange, 14,657; Petange, 11,008.

Production and Trade. The production of cereal crops in 1934, in metric tons, was wheat, 28,900; rye, 13,400; barley, 4800; oats, 46,600. The output of iron and steel, in metric tons, for 1934 was iron ore, 3,828,308; pig iron, 1,955,258; steel, 1,932,377. Out of a total of 45 blast furnaces 21 were in use on Jan. 1, 1935. Trade statistics are included with those of Belgium by reason of the

Belgo-Luxemburg Economic Union ratified on May 5, 1922.

Finance. The strict control of foreign exchange, instituted in conjunction with Belgium on Mar. 17, 1935, was relaxed on April 28 and importers were able to buy foreign exchange to meet all obligations. On Apr. 1, 1935, the gold value of the Luxemburg franc was reduced 10 per cent and equaled 1.25 Belgian francs. The Luxemburg franc was worth \$0.0423 on July 30, 1935. By a decree of May 14, 1935, effective from April 1, the gold clause was repealed on rental and loan contracts and contracts covering supplies and sales but it did not cancel the clause covering payments in foreign currency, the index clause, or the merchandise clause.

Budget estimates for 1935: revenue, 317,694,094 francs; expenditure, 315,257,567 francs. On Jan. 1, 1935, the national debt was 773,700,000 francs.

Government. Executive power rested with the Grand Duchess who also held the right to organize the government. Legislative power rested partly with the Grand Duchess and partly with the Chamber of Deputies of 54 members elected by direct suffrage for six years. The Council of State of 15 members (chosen by the Grand Duchess for life) acts as the Senate. Ruler in 1935, Grand Duchess Charlotte.

LYNCHINGS. No progress can be reported in the handling of the ancient problem of lynchings in the United States and, indeed, if the total figure for 1935 be compared with that for 1934, it is apparent that there was some retrogression. In 1935, 20 persons were lynched, while in 1934 the number was 15. Of the 20 persons lynched, two were white and 18 were Negro. The offenses charged were: Murder, 7; attempted rape, 3; rape, 3; altercation with man, 1; activity in share-cropper organizing, 1; slapping a woman, 1; Communistic activity, 1. Mississippi led the list of states with 7 lynchings, followed by Louisiana with 4, Florida, Georgia, and Texas with 2 each, and California, North Carolina, and Tennessee with 1 each.

Thirteen of the persons lynched were in the charge of the law when they were taken in hand by mobs. Of these, 5 were taken out of jails, 6 from officers outside of jails, usually while being transported to a place of "safety," and 2 were shot to death in jail. On the other hand, there were 53 instances where officers of the law prevented lynchings. Nine of these were in Northern and Western States and 44 in Southern States. In 42 of the instances guards were augmented as a precaution, or the prisoner was removed to a place of safe keeping, and in 11 other instances armed force was used to repel the lynch mob. All told, 84 persons, 17 white and 67 Negro, were thus protected. The protection of prisoners already in the hands of the law would thus not seem to be too difficult a task when the will to do so is there.

The Costigan-Wagner Bill outlawing lynching, discussed in the YEAR BOOK for 1934, was defeated in Congress, the most persistently used argument against it being that the Federal government would be invading States' rights by passing such a law. This sentiment was especially appealing to Senators from Southern States. An analysis of some of the lynchings which took place in these same States during 1935 will cast light upon the nature of the social situations out of which lynchings spring. On Jan. 11, 1935, Jerome Wilson was killed in his cell at the Franklinton, Louisiana, jail. The sheriff's version of the event was as follows:

There wasn't any lynching. Some men got into the jail somehow along about three or four o'clock in the morning. They got a key somehow. Before they got in they shot Jerome Wilson through the window. . . . Then they went into the jail and sawed through the lock of Jerome's cell. . . . Some one beat Jerome over the head with a big hammer. . . . They took his body out and threw it on the road. . . . There wasn't any lynching.

The initial lynching in Mississippi, where seven occurred during the year, took place on Mar. 12, 1935. It was really an interstate kidnaping as well as a lynching, for the victim was transported from Tennessee. That a lynching was to take place was well-known in the neighborhood and indeed a reporter and photographer were able to journey 63 miles by highway from Memphis, Tenn., to the site of the deed, and arrive 40 minutes before it actually took place. The coroner's jury, however, concluded that the victim came to "his death by hanging at the hands of parties unknown" and the prosecuting attorney asserted that "So far as the proof is concerned, we don't know whether it was a hanging or a suicide."

The lynching occasioned by organizing activities among share-croppers, mentioned above, also took place in Mississippi. The victim was the Rev. T. A. Allen on whose coat was found one of the late Huey Long's "Share-the-wealth" buttons. His body was found at the bottom of a stream, but no official recognition of the crime was ever indicated on the part of local authorities. A particularly interesting set of reactions to a lynching party is that of the authorities of a Texas community. On November 12, two Negroes aged 15 and 16 were lynched after being accused of having raped and murdered a white girl. County Attorney O. P. Moore remarked that the crime was "an expression of the will of the people"; while County Judge H. P. Hahn was of the opinion that "The fact that the Negroes who so brutally murdered Miss Kollmann could not be adequately punished by the law because of their ages prevents me from condemning those citizens who meted out justice to the ravishing murderers last night." It is significant to note that the Senators representing these States—Louisiana, Mississippi, Texas—at Washington all opposed the Costigan-Wagner Bill under the banner of States' rights and that all alleged that the law officers of their respective States were entirely prepared to handle the problem in a proper fashion.

The most remarkable statement of the year on the subject was that of Sen. William E. Borah of Idaho, candidate for the Republican nomination for President. Senator Borah bluntly said that if he were elected President he would certainly veto a bill on the lines of the Costigan-Wagner Bill on the grounds of its unconstitutionality.

MACAO, ma-ka'ô. A Portuguese colony in South China. Total area, including the nearby islands of Taipa and Colôane, 11 sq. miles; total population (1927), 157,175 including 152,738 Chinese, 3846 Portuguese, and 591 others.

Trade. The transshipment of goods (mainly in the hands of the Chinese) was the principal business. In 1933, imports were valued at 30,040,698 patacas; exports, 12,495,165 patacas.

Government. The decree of May 9, 1935, provided that the fiscal year be changed to agree with the calendar year and approved the budget expenditure of 87,545,352 paper escudos (escudo equaled \$0.0449 on June 13, 1935) for the 18 months ending Dec. 31, 1936. The colony was administered by a governor (in 1935, Lieut.-Col. José Bernades de Miranda).

History. It was reported during the year 1935 that Pan American Airways had been granted the right to make Macao the terminus of its trans-pacific service.

MCGILL UNIVERSITY. A coeducational institution of higher learning in Montreal, Que., Canada, founded in 1821. The enrollment for the 1935-36 session was as follows: degree students, arts and science, 975; commerce, 176; engineering, 334; architecture, 39; medicine, 471; dentistry, 59; law, 65; library science, 20; graduate studies, 187; diploma students, 39; partial students, 187. At Macdonald College, an affiliated college at Sainte Anne de Bellevue, there were 85 degree students enrolled in the department of agriculture, 118 in the department of household science, and 97 in the school for teachers. The registration in the French Summer School, 1935, was 147, and in the 1935 Summer Library School, 14. The number of members on the teaching staff was 519. The endowment amounted to \$20,292,919, while the income for 1934-35 was \$1,897,592. Among the important gifts were \$24,000 from the Rockefeller Foundation for research in the departments of Medicine and Physics; \$10,000 from estate of Lillie E. Martin for scholarships, and \$12,000 from Carnegie Corporation for the library school. The library contained 455,000 volumes. Principal and Vice-Chancellor, A. E. Morgan.

MACKENZIE, DISTRICT OF. See NORTHWEST TERRITORIES (CANADA).

MACKENZIE, SIR ALEXANDER CAMPBELL. A British composer and conductor, died in London, Apr. 28, 1935. He was born in Edinburgh, Aug. 22, 1847, and at the age of 10 was sent to Sondershausen in Germany to study the violin under K. W. Uhlich and theory under Eduard Stein, who at that time was the conductor of the Sondershausen Ducal Orchestra, in which young Mackenzie played second violin. In 1862 he returned to Edinburgh, but soon went to London to study under Sainton, who advised him to try for a scholarship at the Royal Academy of Music. He won the King's Scholarship in 1862. While at the Academy he studied harmony under Charles Lucas and piano under F. N. Jewson, and at times played in theatre orchestras, as well as under Costa, the famous conductor of the time. In 1865, he returned to Edinburgh where he taught the violin and became a concert violinist, frequently playing his own compositions. For several years after his return to Scotland he remained a member of the orchestra of the Triennial Handel Festival at Crystal Palace. In 1873 he accepted the leadership of the Scottish Vocal Music Association, and also conducted at the Birmingham Festivals of 1864, 1867, 1870, and 1873.

The result of his many activities was a breakdown in health, and he was forced to go to Florence, where he remained for the greater part of 10 years. While in Italy he devoted his time to composition, and his best work dates from that period. From 1885 to 1886 he was conductor of Novello's Oratorio concerts, where he gave many notable performances. His Scottish rhapsody, *Burns*, the opera *Colomba*, and the oratorio, *Rose of Sharon*, produced at the Norwich Festival in 1884, added greatly to his prestige, and in 1888 he was appointed to succeed Sir George McFarren as principal of the Royal Academy of Music, London, and retired in 1924. Occasionally he directed the Royal Choral Society during the absence of Sir Joseph Barnby, and at his death in 1896, assumed the leadership for the remainder of the season. From

1892 to 1899 he conducted the Philharmonic Society Orchestra and introduced Tchaikovsky's *Pathetic Symphony* to a London audience. In 1903 he made a six weeks' tour of Canada.

Sir Alexander's music was at its best when he chose romantic subjects, and the Scottish themes of the majority of his work proved a happy choice, for in them he could give free rein to a high poetical standard and powerful and imaginative effort. Among his more important works may be included: *Rhapsodie Ecossaise*, No. 1 (Glasgow, 1880); *Canadian Rhapsody*, for orchestra (Philharmonic, 1905); the cantatas, *The Bridge* (Worcester Festival, 1881), *Jason* (Bristol Festival, 1882), *The Story of Sayid* (Leeds Festival, 1886), *The Dream of Jubal* (Liverpool Philharmonic, 1889), *The Witch's Daughter* (Leeds Festival, 1904); the operas, *Colomba* (Drury Lane Theatre by Carl Rosa Company, Apr. 9, 1883), *The Troubadour* (ib., June 6, 1886), and the comic opera, *His Majesty* (Savoy Theatre, Feb. 20, 1897); the orchestral ballad, *La Belle Dame Sans Merci* (Philharmonic, 1883); *Jubilee Ode* (Crystal Palace, 1887); suite for violin, *Pibroch* (Leeds Festival, 1889, played by Sarasate); music to *Ravenswood* (Lyceum Theatre, 1890); *Veni Creator*, for chorus, solo quartet and orchestra (Birmingham, 1891); Scottish concerto for pianoforte and orchestra (Philharmonic, played by Paderewski, 1877); suite for orchestra, *London Day by Day* (Norwich Festival, 1902).

Sir Alexander was knighted in 1895, and was the recipient of several music degrees. His memoirs, *A Musician's Narrative*, were published in 1927.

McLENNAN, SIR JOHN CUNNINGHAM. A Canadian physicist, died on the Boulogne-Paris train en route to Paris, Oct. 9, 1935. He was born in Ingersoll, Ont., Apr. 14, 1867, educated at Toronto and Cambridge universities, and became an assistant demonstrator in physics at the former in 1892 and demonstrator in 1899; then followed an assistant professorship in 1902, and full professorship in 1907. Three years before this he was appointed Director of the Physical Laboratory at the University. He retired in 1932 as professor emeritus and visiting professor. From 1930 to 1932 he was Dean of the School of Graduate Studies and Research.

Dr. McLennan's work was done chiefly in connection with electricity, his last researches dealing with the superconductivity of metals, which established the fact that when metal conductors reached a low enough temperature, resistance to the conduction of electricity practically vanished, and the current could pass and repass through the metal with no apparent loss of strength. In 1932, he was successful in an attempt to liquefy helium, which had been done once before, at the University of Leyden about 1908.

The recipient of many honors during the course of his career, Dr. McLennan received the Flavelle Medal of the Royal Society of Canada in 1926 and two years later the Royal Medal of the Royal Society, London. He lectured on the metric system for the Canadian Government in 1906 and was a scientific adviser to the British Admiralty in 1919. From 1916 to 1931 he served as a member of the National Research Council of Canada. He was a fellow of the Royal Society, London and the American Association for the Advancement of Science, and was President of the Royal Canadian Institute, 1916-17, and the Royal Society of Canada, 1924. In the birthday honors of June, 1935, he was created

Knight Commander of the Order of the British Empire.

His publications included many papers on radioactivity, electrical conduction in gases, production and liquefaction of helium, electric conductivity of metals at the lowest temperature, and spectroscopy.

MACLEOD, JOHN JAMES RICKARD. A British physiologist and Nobel Prize winner, died in Aberdeen, Scotland, Mar. 16, 1935. He was born at Cluny, near Dunkeld, Sept. 6, 1876, and received his education at Marischal College, Aberdeen, and at Leipzig. In 1899 he became associated with the London Hospital as a demonstrator of physiology, and in 1902, when he received the degree of Doctor of Public Health from Cambridge University, as a lecturer in biochemistry. From 1901 to 1903 he was McKinnon Research Scholar of the Royal Society. In the latter year he accepted the position of professor of physiology at Western Reserve University in Cleveland, O., where he remained until 1918 when he accepted that post, as well as that of dean of the medical faculty, at the University of Toronto. He resigned in 1928 to become Regius professor of physiology at the University of Aberdeen.

One of the foremost authorities in the field of physiology, Dr. Macleod early turned his attention to research, becoming particularly interested in the causation of the caisson disease, the biochemistry of carbamates, physiological glycosuria, and the respiratory centre. His laboratory at the University of Toronto drew to him the younger scientists, including Dr. Charles H. Best and Dr. Frederick Banting. Collaboration in their researches ensued, and in 1922, their claim that a pancreatic extract, insulin—named by E. Sharpey-Schafer (q.v.)—was efficacious in the treatment of diabetes was made public. Insulin was recognized as the rational treatment of diabetes, for, for many years it had been known that the removal of the pancreas in animals resulted in diabetes. It remained for Drs. Macleod and Banting, however, to extract insulin from the pancreas and to learn that the lack of it was the cause of the disease. So the administration of insulin supplied the patient with the substance that his own pancreas failed to give him.

The fact that insulin proved a controlling influence in the treatment of diabetes without an aftermath of partial failure, was deemed one of the outstanding triumphs of scientific medicine, and in 1923, Professor Macleod and Dr. Banting were awarded the Nobel Prize for their discovery. They shared the prize with Drs. Best and Collip, their assistants in the work. In recognition of his achievement, Dr. Macleod was in that year elected a fellow of the Royal Society and was Cameron Prize winner at Edinburgh.

He was affiliated with a number of scientific societies, being a fellow of the Royal College of Physicians, the Royal Society of Canada, the Royal Society of Edinburgh, and was a member of the American Association for the Advancement of Science and the American Physiological Society (president 1922).

Besides a number of technical papers on insulin, experimental glycosuria, and respiration published in the *Journal of Physiology* and the *American Journal of Physiology*, he contributed the article on "Insulin" to the 14th edition of the *Encyclopædia Britannica*, and was the author of *Practical Physiology* (1903); *Diabetes, Its Physiological Pathology* (1913); *Fundamentals in Physiology* (1916); *Laboratory Manual in Physiology* (1919); *Carbohydrate Metabolism and Insulin* (1926),

and *Physiology and Biochemistry in Modern Medicine* (7th ed., 1934). The last-named has become an international text-book.

MADAGASCAR. A French colony. Area, 241,094 sq. miles; population (1931), 3,571,517. Chief towns (with 1931 populations in parentheses): Tananarive, the capital (92,475); Majunga (20,000), Tamatave (15,022), Fianarantsoa (12,575), Tuléar (12,300), Diégo Suarez (12,300), Nossi-Bé (12,000).

Production and Trade. The main agricultural products (in 1000 metric tons) were coffee, 15 (for 1934-35); maize, 81.6 (1933-34); rough rice, 722.8 (1933-34); potatoes, 56.2 (1933-34); sugar, 8.6 (1934-35). Vanilla, manioc, tapioca, and lima beans were also produced. Livestock in the island (1932): 7,000,000 cattle, 500,000 swine, 255,000 sheep, 70,000 goats, 3000 horses, and 2000 ostriches. Mineral production (1933) was valued at 21,000,000 francs of which graphite (6800 tons) represented 8,200,000 francs; mica (245 tons), 2,330,000 francs; phosphates (1275 tons), 2,550,000 francs; precious stones, 1,015,000 francs. The forests contain many valuable timbers. In 1933, imports were valued at 368,511,000 francs; exports, 317,911,000 francs (franc averaged \$0.0501 for 1933). On Nov. 9, 1935, a regular weekly air service between France and Madagascar was inaugurated.

Government. The budget was balanced at 267,755,000 francs for 1935, and at 270,530,000 francs for 1934 (franc averaged \$0.0657 for 1934). The colony was administered by a governor-general assisted by a consultative council. A delegation of 24 French citizens and 24 natives meet once a year to examine budget proposals. The natives, in their relations with the government, were represented by chiefs. Governor-General, Léon Cayla (appointed in 1930).

Comoro Islands. An archipelago, comprising the islands of Mayotte, Anjouan, Grande Comore, and Moheli, forming a region under the general government of Madagascar. Area, 836 sq. miles; population (1931), 130,253. Capital, Zandzi.

MADDEN, SIR CHARLES EDWARD. A British admiral, died in London, June 5, 1935. Born on Aug. 5, 1862, he joined the navy in 1875, and in 1881 was commissioned sub-lieutenant. The following year (1882) he was appointed acting lieutenant of the *Ruby* and served during the Egyptian War. Promoted to lieutenant two years later (1885) he began to study torpedoes. Being appointed to the *Vernon*, the torpedo school ship at Portsmouth, as a first lieutenant and staff officer, he specialized in torpedo experimental work. Between 1884 and 1896 he served on the *Raleigh* and on the *Royal Sovereign* as a torpedo lieutenant, and in 1896, when promoted to commander, he served on the *Terrible* and the *Caesar*.

Promoted to captain in 1901, he was transferred, in the following year, to the *Good Hope* as flag captain to Sir Wilmot Fawkes, then commanding the Cruiser Squadron. When Captain (Admiral Sir) Henry Jackson was appointed controller in February, 1905, he took Captain Madden with him as his naval assistant. He was appointed naval assistant to Lord Fisher, the First Sea Lord, in 1906, and while serving in this capacity became recognized as a master in the duties of organization, and as such aided in establishing the fighting efficiency of the Fleet. In the following year he was named captain of the *Dreadnaught* and chief of staff of the Home Fleet. He served until December,

1908, when he was called to the Admiralty as private secretary to the First Lord.

From January, 1910, to December, 1911, Madden was Fourth Sea Lord of the Admiralty, and from January, 1910, to April, 1911, served as aide-de-camp to King Edward. Promoted to flag rank in 1912 as a rear admiral he was assigned to the 1st Division of the Home Fleet, and soon afterward transferred to the Fleet Battle Squadron. Appointed commander of the 3rd Cruiser Squadron at the end of 1912 he served until 1914, then was assigned to the 2d Cruiser Squadron.

On Aug. 4, 1914, Admiral Madden was appointed chief of staff to Lord Jellicoe (q.v.), his brother-in-law, who had asked for his services, and in position he was second only in importance to the commander-in-chief. He was responsible for the working of the tactical plans of the commander, and his duty to know the position of every squadron and ship, and to account for every indication of the movements of the enemy. For his good judgment, long experience, and his capacity for work, he was commended in the dispatches at Jutland.

In June, 1916, he was promoted to vice admiral and made Knight Commander of the Order of the Bath. He held the acting rank of admiral, and in November, 1916, on the reorganization of the Grand Fleet, was named to command the First Battle Squadron and became second in command of the Fleet. In April, 1919, when the Grand Fleet ceased to exist as such, he received the thanks of Parliament and a grant of £10,000 for his services and was created a baronet, and the command of the newly-organized Home and Atlantic Fleets was given to him—at that time the most important command on the active list. From 1922 to 1924 he was first and principal aide-de-camp to King George, and in the latter year was promoted to Admiral of the Fleet.

He succeeded Admiral Sir David Beatty as First Sea Lord and Chief of Naval Staff in 1927, and held that position until placed on the retired list July 31, 1930. The Order of Merit was conferred on him in 1931. He reached the age limit for retirement in July, 1929, but was persuaded to prolong his service until a more convenient time. During this interval he was retained on the active list of admirals of the Fleet. Sir Charles was the recipient of many decorations, both British and foreign.

MADEIRA, *ma-dē'ra*; *Port.* *ma-dā'ra*. An archipelago west of Morocco, known as the district of Funchal and considered an integral part of Portugal. Area, 314 sq. miles; population (1930), 211,601. Funchal, the capital, had 75,000 inhabitants.

MADOERA. See NETHERLAND INDIA.

MAGONIGLE, H(AROLD) VAN BUREN. An American architect, died at Bain Harbor, Vt., Aug. 29, 1935. He was born at Bergen Heights, N. J., Oct. 17, 1867, and studied architecture in the offices of Vaux and Radford; Charles C. Haight; McKim, Mead, and White; and Rotch and Tilden of Boston, joining the last-named firm while working for the Rotch Traveling Scholarship, which he won in 1894. In 1889 he was awarded the gold medal of the Architectural League. After two years abroad, he returned to New York and entered business for himself but was not successful. He obtained employment as a draftsman with Schickel and Ditmars, but left in 1901 to form a partnership with H. W. Wilkinson. From 1904 he practiced alone.

His work, which was sincere and emotional, was sometimes criticized for being too academic. It included many well-known monuments, among which

are the Maine and Firemen's Monuments in New York City; the McKinley Monument at Canton, O. (1907), his success being won in competition with long-established architects; the Schenley Fountain, Pittsburgh; the Peace Memorial and the Liberty Memorial in Kansas City, for which he carved the two colossal figures, "Memory" and "The Future." Also, he did the landscaping for this Memorial as well as for the McKinley Monument. His was the winning design for the Robert Fulton Memorial Watergate to be built in New York, but because of lack of financial support, the project was abandoned. He designed the United States Embassy and Consulate in Tokyo, the Arsenal Technical School in Indianapolis, Cornell Alumnus Hall, Ithaca, and the Fulton-Hudson Memorial, New York.

Mr. Magonigle was a member of the American Institute of Architects as well as of other architectural societies, and was an honorary president of the Japanese Society of Architects and a member of the Japan Society. In 1925 he was elected an Associate National Academician, and in 1930 received the gold medal of honor of the New York Chapter of the American Institute of Architects. He was the author of *The Nature, Practice, and History of Arts* (1924) and *Architectural Rendering in Wash* (1926).

MAHÉ. See FRENCH INDIA.

MAINE. **Population**. On Apr. 1, 1930 (Fifteenth Census), 797,423; July 1, 1934, by latest Federal estimate, 804,000; 1920 (Census), 768,014. Portland had (1930) 70,810 inhabitants; Augusta, the capital, 17,198.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Potatoes	1935	161,000	38,640,000	\$21,252,000
	1934	170,000	55,250,000	11,050,000
Hay (tame) ...	1935	1,001,000	898,000*	9,429,000
	1934	990,000	786,000*	11,790,000
Oats	1935	111,000	3,996,000	1,678,000
	1934	111,000	4,440,000	2,220,000
Apples	1935	.....	893,000	893,000
	1934	.....	556,000	623,000

* Tons.

Education. The length of the course through normal school was increased in 1935 to three years. Plans for altering the curriculum occupied a committee of normal-school faculty members. A State director of physical education was appointed. In Portland was established a junior college of business.

Charities and Corrections. In virtue of the administrative act of 1931 the Department of Health and Welfare, in 1935, performed the duties of a department of health, prison commission, directing board for correctional and divers other institutions, and administrator of pensions, poor relief, care for the blind and deaf, Indian welfare, guardianship of children, and paroles.

The State institutions were: State hospitals for cases of mental disorder, at Augusta and Bangor; Pownall State School (feeble-minded), at Pownall; State sanatoria for tuberculosis, at Hebron (post office Greenwood Mountain), and Presque Isle; Maine State Prison, Thomaston; State Reformatory for Women, Skowhegan; State Reformatory for Men, South Windham; State School for Girls, South Portland; Maine School for the Deaf, Portland; State Military and Naval Children's Home, Bath.

Legislation. The Legislature held its regular biennial session but did nothing about creating a

State Power Authority to assume the cost of the Passamaquoddy project (see *Events*, below), operate the completed works, and undertake to repay the Federal Government out of the possible resulting profits.

Political and Other Events. Preliminary work was started near Eastport on the project to build works for the production of electricity from the impounded tidal flow in Passamaquoddy Bay. About 2000 persons were put to work to prepare quarters and facilities for the greater force eventually to carry out the task of construction. The necessary initial allotment of \$10,000,000 of Federal funds was made by President Roosevelt on May 27. Army engineers were put in charge. The project called for the expenditure of some \$47,000,000, for which a corporation to be formed by the State was to give the Government bonds payable out of the anticipated earnings of the completed plant. The plan for such a plant was a modification of the scheme first broached by Dexter P. Cooper some 10 years earlier, which had subsequently been offered for legislative consideration in Maine from time to time.

The FERA investigated the State's administration of aid to the destitute unemployed in Maine and was reported to have demanded that officials in Kennebec and Androscoggin counties be prosecuted; the State authorities, however, maintained that the workers of the Maine Relief Administration were not employees of the State and that it was not responsible for their correct performance of their duty.

Textile mills in the State felt the pressure of processing taxes and a delegation headed by Governor Brann urged the Federal Government on April 29 to replace the processing taxes with a sales tax.

Officers. The chief officers of the State, serving in 1935, were: Governor, Louis J. Brann; Secretary of State, Lewis O. Barrows; Treasurer, George S. Foster; Auditor, Elbert D. Hayford; Attorney-General, Clyde R. Chapman; Commissioner of Education, Bertram E. Packard.

Judiciary. Supreme Judicial Court: Chief Justice, Charles J. Dunn; Associate Justices, Charles P. Barnes, James H. Hudson, Harry Manser, Guy H. Sturgis, Sidney St. F. Thaxter.

MAINE, UNIVERSITY OF. A coeducational State institution of higher learning at Orono, founded in 1865. The enrollment for the fall of 1935 was 1420, of whom 1034 were men and 386 were women. The registration at the summer session of 1935 was 473. The teaching members of the faculty number 172. The productive funds amounted to \$919,593, and the income for the year was \$1,323,004. The library has 117,000 volumes. South Hall, a cooperative dormitory for women, housing 36 students, was opened on Sept. 17, 1935. A gift of \$25,000, to be known as the Payson Fund and to be used as a loan fund and for scholarships, was announced. President, Arthur Andrew Hauck, Ph.D.

MALACCA. See STRAITS SETTLEMENTS.

MALAY STATES. See BRITISH MALAYA; FEDERATED MALAY STATES; UNFEDERATED MALAY STATES; STRAITS SETTLEMENTS; BRITISH NORTH BORNEO; BRUNEI; SARAWAK.

MALDIV ARCHIPELAGO. See CEYLON.

MALTA. A British crown colony in the Mediterranean, 58 miles south of Sicily, comprising the island of Malta (95 sq. mi.), Gozo (26 sq. mi.), Comino (1 sq. mi.). Total area, 122 sq. miles; population (1931), 241,621. The civil population on Jan. 1, 1933, was 248,062. Valetta (capital) had

22,779 persons in 1931; including suburbs it had 48,240. Malta is an important link in British Imperial communications and is the base of the British Mediterranean Fleet.

Production and Trade. Wheat, barley, potatoes, onions, beans, cumin, tomatoes, grapes, and cotton were the main products. The value of agricultural production for 1933-34 was £624,441. There were 780 boats and 3500 persons employed in the fishing industry during 1933-34 and the fish catch was valued at £34,015. Lace, cotton, filigree, beer, and cigarettes were manufactured. The port of Valetta was entered by 1752 vessels (aggregating 4,393,383 tons) during 1934. In 1934, imports were valued at £3,469,035; exports, £575,089.

Government. For 1933-34, revenue amounted to £1,061,622; expenditure, £1,068,128. Budget estimates (1935-36): revenue (exclusive of £17,000 from the Colonial Development Fund), £1,109,028; expenditure, £982,839. After the suspension of the Constitution, Nov. 2, 1933 (See NEW INTERNATIONAL YEAR BOOK FOR 1932 and 1933) the Governor assumed personal control of the local government of the island. He also controlled the armed forces. Two Letters Patent, issued Aug. 21, 1934, and effective from Oct. 1, 1934, provided that English was to continue as the official language of the administration, without prejudice to the use of Italian or Maltese in addition when desirable; Maltese was to be the language of the law courts, except where the parties did not understand it, then Italian or English was to be used; all Governor's Ordinances were to be in Maltese and English only. Governor and Commander-in-Chief in 1935, Sir David Campbell.

History. With the development of the Anglo-Italian crisis towards the end of August, 1935, the strategic situation of Malta within 60 miles of the Sicilian coast made it one of the key positions in the threatened Mediterranean conflict. Beginning in August, the British sent large military and naval reinforcements to the island, greatly strengthened its defenses, and instructed the inhabitants in precautions against air raids. In October most of the dependents of the British soldiers in Malta were sent to England as a precautionary measure.

While the bulk of the population remained loyal to the British connection, the nationalist movement among the Italian element caused the British officials much concern. The nationalist agitation, which had caused political friction in Malta for several years, had led to the suspension of the Constitution in 1933. The discontent aroused in the island by the withdrawal of its autonomous rights was increased when the British on Sept. 14, 1935, instituted a drastic press censorship in connection with their military preparations. On October 10 the authorities deported seven prominent Italian residents of the island for anti-British activities. The British also made the teaching of English compulsory in the primary schools in place of Italian (Maltese was also recognized as a language of instruction). This action led 350 members of the Italian Chamber of Deputies on October 31 to interpellate Premier Mussolini as to what action his government intended to take to "defend the Italian language and culture on the island of Malta."

For the situation which produced the Anglo-Italian crisis, see ETHIOPIA, GREAT BRITAIN, and ITALY under *History*; LEAGUE OF NATIONS.

MAMMALS. See ZOOLOGY.

MANADO. See NETHERLAND INDIA.

MANCHOUKUO. A new state established under Japanese auspices on Mar. 1, 1932, and com-

prising the former Chinese provinces of Fengtien, Kirin, and Heilungkiang in Manchuria and Jehol in Inner Mongolia. Capital, Hsinking (formerly Changchun). Ruler in 1935, Emperor Kangtê, enthroned Mar. 1, 1934.

Area and Population. According to an official estimate of March, 1935, the total area of Manchoukuo, including the South Manchuria Railway zone under Japanese jurisdiction, was 503,013 square miles. The population in December, 1934, was estimated at 31,339,411, including 434,002 in the railway zone. The total population included 30,444,253 Manchurians (Chinese, Manchus, and Mongols), 598,205 Koreans, 213,057 Japanese, and 83,896 others. Estimated populations of the chief cities on Dec. 31, 1934, were: Mukden, 526,879; Harbin, 419,479; Hsinking, 228,323; Antung, 194,230; Kirin, 143,250; Yingkow, 140,875. There were on June 30, 1935, 44,359 denationalized Russians, 21,272 citizens of the Soviet Union, 5054 naturalized White Russians, 1519 Poles, 459 Germans, 424 British, and 226 Americans.

Education. On May 1, 1933, 440,633 pupils were enrolled in primary schools, 27,882 in middle schools, 8068 in normal schools, 5069 in vocational schools, and 2121 in colleges. The number of schools open was: Primary, 7635; middle, 216; normal, 78; vocational, 53; colleges, 7.

Production. Ninety per cent of the population is settled in rural areas and about 85 per cent is actually engaged in agriculture. About 34 per cent of the total area is arable land and 44 per cent of the arable land was under cultivation in 1935. The value of agricultural production averaged about 650,000,000 yen annually. Estimated production of the chief crops in 1935 was (in metric tons): Soy beans, 3,995,000; kaoliang, 3,976,000; corn, 1,860,518; wheat, 826,000; millet, 2,916,000; rice, 261,000. Livestock estimates (1934) were: Cattle, 2,700,000; horses, 3,600,000; sheep, 4,900,000; swine, 9,800,000. The timber output in 1934 totaled 1,499,776 cubic meters. The value of marine products in 1934 was 1,021,143 yen. Mineral and metallurgical output in 1933 (in metric tons) was: Coal, 9,062,604 (11,700,000 in year ended Mar. 31, 1935); iron ore, 1,176,643; pig iron, 433,523; manganese ore, 750; gold ore, 17,811; coke, 476,278; oil shale, 2,683,440; crude oil, 87,076; magnesite, 71,376. The value of industrial production in 1933 was estimated at 196,362,262 yen, the chief lines being chemicals, food and drink, spinning, machinery and tools, gas and electricity, and ceramics.

Foreign Trade. According to press reports, Manchoukuo's imports in 1935 totaled 603,000,000 Manchoukuo yuan and exports 421,000,000 yuan. In 1934 imports were 593,562,248 yuan; exports, 448,426,567 yuan. The chief sources of 1935 imports and exports, in order of importance, were Japan, China, Germany, Great Britain, and the United States. The chief exports are soy beans and their products (228,119,000 yuan in 1934), millet, kaoliang, coal, pig iron. Cotton goods, machinery, and tools are leading imports.

Finance. The fiscal year, which formerly ended on June 30, was changed to coincide with the calendar year commencing Jan. 1, 1936. The Manchoukuoan general accounts budget for 1934-35 balanced at 212,000,000 yuan with the aid of Japanese loans. The budget for the short year from July 1 to Dec. 31, 1935, balanced at 104,998,700 yuan, excluding the supplementary budgets totaling 5,033,687 yuan and the special accounts (revenues, 131,518,108 yuan; expenditures, 97,991,292 yuan). The indebtedness incurred by the Manchou-

kuo Government up to Aug. 31, 1935, totaled 176,720,000 yuan (internal, 56,720,000; external, 120,000,000). In addition, outstanding foreign loans contracted by the former Manchurian régime amounted to 1,668,624,973 yuan.

The exchange value of the Manchoukuo yuan and the Japanese yen remained approximately equal at about \$0.2871 during 1935. Both were "managed" currencies, although the yuan was based on silver and the yen on gold. In November, 1935, the Japanese cabinet adopted measures for stabilizing the yuan permanently in relation to the yen.

Communications. The mileage of railways in Manchoukuo on July 31, 1935, was 5048.6 miles, an increase of 1364 miles since the Japanese assumed control in 1931. Of the total, 4136 miles were owned by the Manchoukuo Government, including the Chinese Eastern Railway purchased from the Soviet Union in March, 1935; 700 miles by the South Manchuria Railway Co.; and 213 miles by private interests. The gauge of the Harbin-Hsinking line of the Chinese Eastern Railway (renamed the North Manchuria Railway in 1935) was changed during the summer of 1935 from the old Russian gauge of 5 feet to the standard gauge of 4 feet 8½ inches to conform to the other lines. Highways suitable for motor traffic extended 3400 miles. Seventeen airlines were in operation in 1935 and there were air connections with the chief Korean and Japanese cities.

Government. The Constitution of Mar. 1, 1934, established a monarchical form of government. It invested the Emperor with "legislative powers with the approval of the Legislative Council" and empowered him to "determine the organization of the different branches of the government and appoint and dismiss government officials." He was authorized to declare war, make peace, conclude treaties, and exercise supreme command of the military, naval, and air forces. There is an advisory Privy Council of five members; an advisory Legislative Council appointed by the Emperor; a State Council, or cabinet, consisting of nine departments; a General Affairs Board, attached to the State Council, which supervises budgets and national policies; and a Supervisory Council under direct control of the Emperor, empowered to "conduct supervisory duties and audit the accounts." Of the 5700 members and employees of the central government in 1935, 3250 were Japanese. The actual power rested in the hands of the Japanese ambassador to Manchoukuo, who was also commander-in-chief of the Japanese forces in Manchoukuo and governor of Kwantung (q.v.). Gen. Jiro Minami was appointed to this post Nov. 27, 1934. The first Prime Minister of Manchoukuo, Cheng Hsiao-hsu, was succeeded on May 22, 1935, by Chang Ching-hui.

See CHINA, JAPAN, MONGOLIA, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

MANCHURIA. See MANCHOUKUO.

MANDATED TERRITORIES. See CAMEROON, FRENCH; CAMEROONS, BRITISH; JAPANESE PACIFIC ISLANDS; NAUROMU; NEW GUINEA; PALESTINE; RUANDA-URUNDI; SAMOA, WESTERN; SOUTH-WEST AFRICA; SYRIA; TANGANYIKA; TONGAREVA. See also LEAGUE OF NATIONS; JAPAN under *History*; INTERNATIONAL LAW.

MANITOBA, mǎn'ī-tō'ba. A Province of Canada. Area, 251,832 sq. miles; population (1935 est.), 739,000 compared with 700,139 (1931 census). During 1934 there were 13,310 births, 5169 deaths, and 5296 marriages. Chief cities (with 1931

populations): Winnipeg, the capital (218,875), Brandon (17,082), St. Boniface (16,305), Portage la Prairie (6597). During the school year 1934-35, there were 4290 school departments with a total enrollment of 144,741 students of whom 19,999 were high school students. The University of Manitoba had 2642 full course students in the same year.

Production. The estimated value of field crops for 1935 was \$30,792,000 (\$49,761,000 in 1934) of which wheat (18,800,000 bu.) represented \$11,092,000; oats (32,937,000 bu.), \$5,929,000; barley (23,533,000 bu.), \$4,942,000; hay and clover (1,003,000 tons), \$4,684,000; fodder corn (365,300 tons), \$1,461,000; potatoes (137,400 tons), \$1,017,000. The 1934 milk output amounted to 523,438 short tons. Livestock (1934): 794,800 cattle, 242,000 swine, 216,000 sheep, and 296,000 horses.

Mineral production (1934) was valued at \$9,776,934, including gold (132,321 fine oz.), \$4,565,075; copper (30,867,141 lb.), \$2,290,126; zinc (47,264,342 lb.), \$1,438,538; silver (1,252,920 fine oz.), \$594,647. In 1935, the output of gold was 146,544 fine oz. valued at \$5,156,883. The fish catch (1934) was valued at \$1,465,358. Fur production (1933-34) amounted to 599,550 pelts valued at \$1,323,522. During 1933, from the 1073 manufacturing plants, with a total of 20,749 workers, the net value of products was \$46,711,175.

Government. For the year ended Apr. 30, 1935, revenue amounted to \$14,383,862; expenditure, \$14,224,427. Budget estimates (year ending Apr. 30, 1936): revenue, \$14,050,193; expenditure, \$14,083,067. Government was vested in a lieutenant-governor and a legislative assembly of 55 members elected for five years (38 Liberal-Progressives, 10 Conservatives, 5 Laborites, and 2 Independents, in 1935). In the Dominion Parliament, Manitoba was represented by 6 Senators and 17 members in the House of Commons. At the Dominion General Election of Oct. 14, 1935, 11 Liberals, 2 Conservatives, 2 Liberal-Progressives, and 2 belonging to the Coöperative Commonwealth Federation were elected to the House of Commons at Ottawa. Lieutenant-Governor in 1935, W. J. Tupper; Premier, John Bracken (Liberal). See CANADA.

MANUFACTURED GAS. See GAS.

MARIANA ISLANDS. See JAPANESE PACIFIC ISLANDS.

MARIETTA COLLEGE. A nonsectarian co-educational institution at Marietta, O., founded in 1835. The total registration for the autumn term of 1935 was 376, of whom 233 were men and 140 women. The 1935 summer school enrollment was 33. The faculty numbered 33. The endowment amounted to \$1,309,426 and the income for the year was \$104,574. The library contained 107,889 volumes. President, Edward Smith Parsons, LL.D.

MARINE DISASTERS. In American shipping the most notable disaster in 1935 occurred on the night of January 23 when the S.S. *Mohawk*, under charter to the Ward Line, collided with the Norwegian freighter *Talisman* about five miles off the coast of Sea Girt, N. J. The *Mohawk*, bound for Havana, and carrying 53 passengers and a crew of 107, sank within half an hour, though all but 14 passengers and 31 members of the crew were rescued. Three weeks earlier, on January 2, the steamboat *Lexington* of the Colonial Line, bound from New York to Providence, was sheared in half by the freighter *Jane Christensen* in the East River near the Manhattan Bridge, New York. The two sections of the steamboat sank within 10 minutes. Though carrying a crew of 55 and 126 pas-

sengers, nearby tugboats and nearness to the shore permitted the rescue of all the passengers and all but five of the crew. On January 7, the S.S. *Havana*, of the Ward Line, enroute to Havana, with 51 passengers and a crew of 125, struck a reef off the Bahamas. Guided by a Coast Guard seaplane rescue vessels picked up life boats containing all passengers, except one who had died of heart failure, and 43 of the crew. The rest of the crew remained on the ship and were ultimately rescued. On September 1, blown from her course by a hurricane, the S.S. *Dixie* of the Morgan Line, struck a reef off the southeast coast of Florida. The 231 passengers and crew of 121 were all rescued, and the ship ultimately refloated.

Other major marine disasters of the year were:

February 18. The Chinese S.S. *Fulong* sank with a loss of more than 100 lives off Wuhuko.

July 3. The Japanese cruise steamer *Midori Maru*, crowded with holiday passengers, in a collision with a freighter, sank in the early morning. Of 166 passengers and a crew of 85, 104 lives were lost.

December 20. At Santos, Brazil, the Swedish freighter, *Britt Marie*, unloading a cargo of nitrate, blew up and sank at the dock. At least 31 persons were killed in the explosion and many seriously injured.

MARINKOVIĆ, VOYISLAV. A Yugoslavian statesman, died in Belgrade, Sept. 18, 1935, where he was born on May 1, 1876. He was educated for the law at the Sorbonne, Paris, and in 1901 entered the Serbian ministry of finance. Elected to the Skupshtina (the Serbian Chamber of Deputies) as a Progressive in 1908, seven years later he was sent as a Serbian delegate to the Financial Congress in Paris to plan the liquidation of the financial side of the Balkan Wars. In 1916 he served as a Serbian delegate to the Inter-Allied Conference also held in Paris. During the period from 1914 to 1917 he sat as a progressive member of the Coalition cabinet, resigning to aid in drafting the Corfu Declaration, which comprehended a kingdom of Serbs, Croats, and Slovenes, in which each of the three parts was to have its own constitution. He rejoined the cabinet in November, 1918, and in the following year was active in the formation of the Democratic Union.

Early in 1920, he served as minister for religious affairs in the cabinet of Vesnitch, and in the latter part of that year joined the Pashić cabinet as minister of the interior, remaining until November, 1921, and the fall of that cabinet. In a cabinet formed by Davidović in July, 1924, M. Marinković became minister of foreign affairs and held that office until October. He again held that office in the cabinet of Vukitchević from April, 1927, to July 4, 1928, and also in that formed by General Zhivković in January, 1929. Upon the resignation of the General in April, 1932, he formed a government, which fell in June of that year. In October, 1934, he entered the cabinet of Uzunović as minister without portfolio but failed to stand for reelection to the Skupshtina during May, 1935.

In the field of foreign affairs, Marinković was considered an astute politician, the crowning points of his career being the treaty of coöperation and mutual defense made with France in 1927, and the preservation of peace with Italy, particularly after the Albanian dispute of 1927, which threatened the peace of the country.

MARITIME PROVINCES. See NEW BRUNSWICK; NOVA SCOTIA; and PRINCE EDWARD ISLAND.

MARQUETTE UNIVERSITY. An institution of higher education for men and women, under Roman Catholic direction, in Milwaukee, Wis., organized as a college in 1881 and chartered

as a university in 1907. The total enrollment for the autumn of 1935 was 3446. The registration for the 1935 summer session was 696. The faculty numbered 336. Endowment funds amounted to \$2,582,201. The income for the year was \$937,783, which includes the value of the services rendered gratis by Jesuits in 1934-35. The library contained 75,434 volumes. President, the Rev. William M. Magee, S.J., LL.D.

MARSHALL ISLANDS. See JAPANESE PACIFIC ISLANDS.

MARTIN, FRANKLIN H. An American surgeon, died in Phoenix, Ariz., Mar. 7, 1935. Born in Ixonia, Wis., July 13, 1857, he attended the public schools of Wisconsin, and graduated from the Chicago Medical College (now the Medical School of Northwestern University) in 1880. After serving as an interne in Mercy Hospital, Chicago, he joined the staff of the South Side Dispensary as a gynecologist in 1883, and three years later became professor of gynecology at the Polyclinic Medical School, resigning from both positions in 1888 to become gynecologist at the Woman's Hospital. He was instrumental in founding the Charity Hospital in 1887, and in the following year he and Dr. W. F. Coleman established the Post Graduate Medical School.

In 1905, Dr. Martin started *Surgery, Gynecology, and Obstetrics*, which became one of the foremost medical journals in the world. He served as its editor from its inception, and in 1913 added to it *International Abstract of Surgery*, a leading journal. In 1932 he and his wife presented this journal, which included a building and its contents, to the American College of Surgeons. Also, he was associate editor of the *American Journal of Obstetrics and Gynecology*.

It was Dr. Martin's belief that the general public should be admitted more intimately into the confidence of the surgical profession in order to elevate its standards, and in 1910, to carry out his views, he established the Clinical Congress of Surgeons of North America, now known as the Clinical Congress of the American College of Surgeons. Out of this organization grew the American College of Surgeons, founded in 1913. Since its founding, Dr. Martin had been its director-general, and in 1928-29 acted as president. In 1918, the first scientific survey of hospitals of 100 beds or more was undertaken by the College, and out of the 692 investigated only 89 were found to comply with the minimum requirements of the College. The approval of the College was received by 2523 hospitals in 1934.

During the World War, Dr. Martin, as a colonel in the U. S. Army Medical Corps, served as a member of the Committee on Medicine and Sanitation of the Council of National Defense, remaining until 1921; and as a member (1917-18) of the General Medical Board of the Council he was active in organizing State and county committees of medical men and in founding the Volunteer Medical Service Corps. For his services, which included several months' foreign duty, he received the Distinguished Service Medal, and was made a Companion of the Order of St. Michael and St. George, and a Companion of the Order of the Crown of Italy. He was a founder, in 1919, of the Gorgas Memorial Institute of Tropical and Preventive Medicine, and also served as its chairman.

Dr. Martin engaged actively in the work of many medical associations, and was president of the American Gynecological Society, and was the author of *The Treatment of Fibroid Tumors of the Uterus* (1897); *Treatise on Gynecology* (1903);

South America from a Surgeon's Point of View (1923); a monograph, *Australia and New Zealand* (1924); *The Joy of Living—An Autobiography* (1933).

MARTINIQUE, mar'ti-nēk'. A French West Indian colony. Area, 385 sq. miles; population (1931), 234,695. Capital, Fort-de-France (43,338 inhabitants). Sugar, rum, cacao, pineapples, bananas, coffee, and tobacco were the main products. In 1933, total imports were valued at 191,821,000 francs; total exports, 200,505,000 francs (franc averaged \$0.0501 for 1933). For 1933 the budget was balanced at 97,665,730 francs. Government was under a governor assisted by an executive council, an elected general council, and elected municipal councils.

MARYLAND. Population. On Apr. 1, 1930 (Fifteenth Census), 1,631,526; July 1, 1934, by latest Federal estimate, 1,671,000; 1920 (Census), 1,449,661. Baltimore had (1930) 804,874 inhabitants; Annapolis, the capital, 12,531.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	541,000	18,935,000	\$13,254,000
	1934	515,000	16,995,000	14,106,000
Hay (tame)	1935	404,000	561,000 ^a	5,610,000
	1934	403,000	578,000 ^a	7,514,000
Wheat	1935	406,000	8,323,000	6,325,000
	1934	387,000	7,934,000	7,141,000
Tobacco	1935	34,000	26,350,000 ^b	5,138,000
	1934	32,300	23,418,000 ^b	4,403,000
Potatoes	1935	33,000	3,135,000	1,881,000
	1934	33,000	3,267,000	1,764,000

^a Tons. ^b Pounds.

Mineral Production. There were mined in the State some 1,650,000 net tons of coal in 1935, as against 1,627,112 for 1934. There were burned in byproduct ovens in the State, in 1934, 1,100,721 tons of coal. The ovens produced 784,539 net tons of coke, whereof the producers themselves consumed 685,877 tons in blast furnaces. These blast furnaces, employed in smelting certain sorts of iron ore imported from abroad, consumed 972,555 gross tons of such ores in 1934 and produced therefrom 704,850 gross tons of pig iron, as against 617,187 tons produced in 1933.

Education. The number of inhabitants of schoolgoing age (reckoned as between 5 and 18 years, inclusive) was stated for November, 1934, as 407,163. Those actually enrolled in the elementary and secondary public schools in the academic year 1934-35 numbered 295,477. Of these, 239,466 were in common schools or elementary grades, while the remainder, 56,011, were in high schools (the last four years of the course). The year's current expenditures for public-school education in the State totaled \$17,602,209. Teachers' salaries, for the year, averaged \$1400.

Legislation. The regular legislative session, which adjourned on April 15, authorized the issue of \$8,500,000 of State bonds, mainly for meeting deficit incurred in the fiscal year 1935. It raised the tax on collateral inheritances to 7½ per cent, from 5, and imposed a tax of 1 per cent on direct inheritances: these added taxes were to serve the charges on the new issue of bonds. A budget involving expenditure of \$62,327,751 over the ensuing two years was adopted. The State's tax on property *ad valorem* was set at 0.22 per cent. There was created a tax at 1 per cent of gross receipts on retail sales, to apply for a year (until the end of March, 1936) in order to cover the cost of State aid to the needy unemployed and of pensions for

the aged. An equivalent tax called a titling tax was applied to the special case of purchases of automobiles. The Chesapeake Bay Authority was created, to handle public works in the area of the Bay. The law as to pensions for the aged was altered, for harmony with the Federal Social Security Act.

Political and Other Events. The support of the destitute unemployed in the State continued through most of 1935 on a great scale. The cost of such support in 1934, as reported by the FERA in March, 1935, had been \$19,842,881; this came to some \$12 per capita of the population, the approximate rate for the country as a whole. The FERA contributed 74 per cent of the total for the State; of the remainder, the State government paid all but one-seventh, which came from subdivisions. The President, in his allocation of some \$900,000,000 of "work-relief" money among the States on Oct. 8, 1935, granted Maryland \$9,180,000, additional to earlier grants for public works.

Governor Nice, Republican, who took office in January, was in the uncommon position of having won a Governorship from a Democratic Governor in 1934. He held attention in 1935 as an active and severe critic of the "New Deal."

Officers. The chief officers of the State, serving in 1935, were: Governor, Harry W. Nice; Secretary of State, Thomas L. Dawson; Treasurer, Hooper S. Miles; Auditor, James L. Benson; Comptroller, William S. Gordy, Jr.; Attorney-General, Herbert H. O'Connor; Superintendent of Schools, Albert S. Cook.

Judiciary. Court of Appeals: Chief Judge, Carroll T. Bond; Associate Judges, Benjamin A. Johnson; T. Scott Offutt, William Mason Shehan, Francis N. Parke, Hammond Urner, Walter J. Mitchell, D. Lindley Sloan.

MARYLAND, UNIVERSITY OF. A coeducational State institution of higher learning at College Park and Baltimore, Md., founded in 1807. The enrollment for the autumn term of 1935 was 3401. The 1935 summer school had an attendance of 979. The faculty numbers 566. The total income from appropriations and other receipts, for the year ended Sept. 30, 1935, amounted to \$2,509,275. The library contains 99,586 volumes. During the year a new Arts and Sciences Building and a new Women's Dormitory were completed, and the Dairy Building was remodeled, at College Park. President, H. Clifton Byrd.

MASSACHUSETTS. Population. On Apr. 1, 1930 (Fifteenth Census), 4,249,614; July 1, 1934 (latest Federal estimate), 4,335,000; 1920 (Census), 3,852,356. Boston, the capital, had (1930) 781,188 inhabitants; Worcester, 195,311; Springfield, 149,900.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	348,000	483,000*	\$7,583,000
	1934	336,000	411,000*	8,056,000
Cranberries	1935	13,700	300,000*	3,450,000
	1934	13,700	290,000*	3,016,000
Apples	1935	.....	2,418,000	2,418,000
	1934	.....	1,435,000	1,808,000
Potatoes	1935	16,000	1,760,000	1,232,000
	1934	16,000	2,560,000	1,715,000
Tobacco	1935	3,500	5,020,000*	1,425,000
	1934	3,000	4,495,000*	1,237,000
Corn	1935	39,000	1,599,000	1,279,000
	1934	37,000	1,517,000	1,380,000

* Tons. * Barrels. ° Pounds.

Education. For the academic year ended with June 30, 1935, the number of inhabitants of school

age (reckoned as from 5 to 16 years) was stated as 828,665. The average number of those attending the public schools was 732,495; and the total of the enrollments of pupils in the public schools was 770,653. Of those so enrolled, 485,859 were in the elementary grades, 108,295 in junior high schools, and 176,499 in the other high schools. These enrollments ran lower for the elementary group and somewhat higher for the high schools than those of the year previous. The year's expenditures for public-school education in the State totaled \$68,661,142, of which \$66,094,532 went for support and \$2,566,610 for outlay. The salaries of all teachers, principals, and supervisors, for the year, were estimated to average \$1785. This average and the expenditures, except for outlay, somewhat exceeded those for the year before.

Charities and Corrections. The administrative system that continued in force in 1935 placed the State's central authority over each of several groups of institutions for the care and custody of persons in the hands of a corresponding, related department of the State government. A Department of Public Welfare, headed by a commissioner and an advisory board of six, gave assistance to some 346,000 individuals, at a cost of about \$11,000,000. The recipients included 4418 mothers and 13,479 children, helped under the mothers'-aid law. This department had custody (December 1) of 7703 children, wards of the State; it had charge of 3068 other minors, who were on parole from the State training schools. It granted State aid to the aged, supervised town planning, controlled housing regulations, supervised divers charitable bodies, and passed on proposed adoptions. It directed the State Infirmary at Tewkesbury (2973 inmates); Massachusetts Hospital School, Canton (293); Lyman School for Boys, Westborough (351); Industrial School for Girls, Lancaster (257); Industrial School for Boys, Shirley (305).

Connected with a Commissioner of Correction were: the State Prison, Boston; Massachusetts Reformatory, Concord; Reformatory for Women, Framingham; Prison Camp and Hospital, Rutland; State Farm, Bridgewater. Connected with a Department of Mental Diseases were: State hospitals at Worcester, Taunton, Northampton, Danvers, Westborough, Medfield, Monson, Foxborough, Grafton, Wrentham, Gardner, Belchertown, Waltham, and Boston. The Department of Health had authority over five State sanatoria.

Legislation. The enactments of the Legislature included a law creating a system of insurance against unemployment, to provide payments to employees thrown out of work. This system was designed to qualify the State for the Federal subvention to such payments, offered in the Social Security Act (see UNITED STATES; Congress). A law was passed to repress subversive teaching; it required that all teachers in universities and schools, whether public or private, take an oath to support the Constitution of the United States and that of Massachusetts. Some of the close restrictions upon the serving of alcoholic beverages in the State's previously established system of licensed taverns were removed, with the effect that drinking places were allowed to revert more nearly to the type of the former saloons. The State House of Representatives passed a resolution condemning the Nazis' reported persecutions of inhabitants of Germany "on account of their religious faith and nationality" as "abhorrent to modern civilized nations."

Political and Other Events. Governor Cur-

ley, who took office in January, stirred the resentment of a class whose families had been long established in the State by asking for the abolition of the Governor's Council and by emptying many of the offices of the State in the early months of his term. He rejected in sharp terms on August 13 a protest of the German consul against the anti-Nazi resolution of the lower legislative house.

The application of the compulsory oath for teachers met with some opposition in October. Kirtley F. Mather, professor of geology at Harvard, declared in a public meeting that he would refuse to swear, but President Conant stated on October 4 that Harvard would conform with the law, and Mather and other objectors on the faculty thereupon took the oath.

Textile manufacturers in Massachusetts and adjacent States claimed that the AAA and its processing taxes had aggravated the trouble in their industry. Their active agitation against the processing taxes brought upon them the reproof of Secretary of Agriculture Wallace, who on April 17 charged them with "whining," raising a "smoke screen," and resorting to "false publicity." This was answered by mass meetings in Fall River and Salem and numerous declarations from business organizations. The receivers of one of the most seriously affected companies, the Hoosac Mills Corporation, employing some 4500 people in the State, had brought a suit against the requirement that they pay the processing tax on their cotton. The Federal Circuit Court at Boston, ruling in favor of the mills on July 16, held the processing taxes, as imposed under the original Agricultural Adjustment Act, invalid. Many other manufacturers hastened in consequence to sue out injunctions against these taxes.

Public support for the destitute unemployed continued at a high rate for much of the year; it was met largely from public sources within the State. As reported by the FERA on March 1, such support had cost \$72,966,811 for 1934. Of this the FERA had supplied 55.1 per cent and public bodies in Massachusetts all the rest except \$148,986 furnished by the State itself. The whole cost for 1934, coming to \$17.16 per capita, decidedly exceeded the corresponding rate for the entire nation, which was about \$12. This excess was largely attributable to the State's high proportion of persons looking to industrial wages for their livelihood; partly also it was attributed to the State's textile manufacturers' paying toward the Federal aid to farmers in other States, through processing taxes, with resulting difficulty to the industry in Massachusetts.

Officers. The chief officers of the State, serving in 1935, were: Governor, James M. Curley; Lieutenant-Governor, Joseph L. Hurley; Secretary of the Commonwealth, Frederic W. Cook; Treasurer, Charles F. Hurley; Auditor, Thomas H. Buckley; Attorney-General, Paul A. Dever; Commissioner of Education, Payson Smith.

Judiciary. Supreme Judicial Court: Chief Justice, Arthur Prentice Rugg; Associate Justices, John Crawford Crosby, Edgar P. Pierce, F. Tarbell Field, Charles H. Donahue, Henry T. Lummus, Stanley E. Qua.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY. A nonsectarian institution for scientific and technical education in Cambridge, Mass., founded in 1861. The enrollment for the autumn of 1935 was 2540, including 522 graduate students. For the summer session, the registration was 1010. There were 248 members on the faculty and 284 other members on the active staff. The produc-

tive funds amounted to \$31,767,000, and the income for the year was \$3,395,000. The library contained 305,000 volumes. President, Karl Taylor Compton, D.Sc., D.Eng., Ph.D., LL.D.

MASSACHUSETTS STATE COLLEGE.

A State institution offering collegiate training in the fields of agriculture, natural sciences, social sciences, and home economics, founded in Amherst in 1863. The enrollment for the autumn of 1935 was 1424, while the summer session had an attendance of 174. There were 215 members on the faculty. The income in 1935 amounted to \$1,193,905, of which \$986,375 was from State appropriations and \$207,530 from Federal appropriations. The library contained approximately 100,000 volumes. As a part of the Federal and State emergency building programme, two new major buildings were constructed—the Goodell Library and Thatcher Hall, a men's dormitory. President, Hugh P. Baker, M.F., LL.D.

MAUNA LOA, ERUPTION OF. See HAWAII under *History*.

MAURITANIA. See FRENCH WEST AFRICA.

MAURITIUS, mô-rish'ŭs; -rish'ŭs. A British crown colony. Its dependencies comprised many small islands (250 to 1200 miles away) of which the largest was Rodrigues. Area, 720 sq. miles; population of Mauritius (Jan. 1, 1935), 393,733; dependencies, 10,457 of whom 9111 were on Rodrigues. During 1934 there were 13,518 births, 10,069 deaths, and 1767 marriages. Port Louis, the capital, had 54,876 inhabitants in 1934.

Production and Trade. The output of sugar (the main industry) was estimated at 280,000 tons for 1935. Tobacco, fibre, tea, rum, coconuts, and pineapples were also produced. In 1934, exclusive of specie and bullion, imports were valued at Rs29,680,346; exports, Rs26,136,140 of which sugar (185,606 tons) accounted for Rs24,510,185 (rupee averaged \$0.3788 paper for 1934).

Government. For the fiscal year ended June 30, 1934, revenue totaled Rs16,567,110; expenditure, Rs14,634,339; public debt, £3,246,994 against which the sinking fund was £1,699,669. Government was administered by a governor assisted by an executive council, and a council of government consisting of the governor and 27 members (10 elected, 8 ex-officio, and 9 nominated). Governor in 1935, Sir W. E. F. Jackson.

MEAD-MCKELLAR AIR MAIL ACT.

See AERONAUTICS.

MECHANICAL ENGINEERS, THE

AMERICAN SOCIETY OF. An organization founded in 1880 to promote the art and science of mechanical engineering and the allied arts and sciences. It includes 17 professional divisions—aeronautic, applied mechanics, fuels, hydraulic, iron and steel, machine shop practice, management, materials handling, national defense, oil and gas power, petroleum, power, graphic arts, process industries, railroad, textile, and wood industries. The membership at the beginning of the fiscal year, Oct. 1, 1935, was 13,891.

The society has established local sections in 71 industrial centres of the United States to foster and promote the welfare of strong local engineering societies, inclusive of members of all branches of the engineering profession, together with architects and chemists. Also it has 112 student branches, with a total membership of about 3250.

There were held during the year 300 meetings of the local sections of the society, as well as meetings of the student branches and professional divisions. The major meetings, however, were the semi-annual

nual meeting, held in Cincinnati, Ohio, June 17-21, 1935, and the annual meeting, held in New York, N. Y., December 2-6.

During 1935 the society continued to participate in the Engineers' Council for Professional Development, an organization of a number of engineering societies, working toward improving the status of the engineer.

The society also assisted in relief work for unemployed engineers through the employment service operated by the civil, mining and metallurgical, electrical, and mechanical engineering societies, with offices in New York, N. Y., Chicago, and San Francisco. Its local work was carried on through the Professional Engineers Committee on Unemployment in New York and through similar agencies set up by local sections of the society, in co-operation with other bodies, in a number of other cities. The society is giving attention to the economic and industrial conditions affecting the employment of engineers.

The technical committees of the society carried on their work in research, standardization, and the formulation of safety, power test, and boiler codes and rules. The regular publications during 1935 were: *Mechanical Engineering*, the monthly journal; *Transactions*, containing the year's papers of specialized interest and also issued monthly, with several supplementary sections containing the annual reports, necrology, and an index to all publications of the society for the year; and *Mechanical Catalog*.

The officers for 1935-36 are: President, William L. Batt; vice-presidents, James H. Herron, Eugene W. O'Brien, Harry R. Westcott, Alex D. Bailey, John A. Hunter, Robert L. Sackett, William A. Shoudy; managers, James A. Hall, Ernest L. Ohle, James M. Todd, Bennett M. Brigman, Jiles W. Haney, Alfred Iddles, James W. Parker, Wm. Lyle Dudley, W. C. Lindemann; treasurer, Erik Oberg; secretary, C. E. Davies; assistant secretaries, Ernest Hartford, C. B. LePage; editor, George A. Stetson.

The main office of the society is in the Engineering Societies Building, 29 West Thirty-Ninth Street, New York, N. Y. There is a mid-west office at 205 West Wacker Drive, Chicago, Ill., and a mid-continent office, concerned principally with the problems of the petroleum industry, at 213 Midco Building, Tulsa, Okla.

MECKLENBURG-SCHWERIN. See GERMAN.

MECKLENBURG-STRELITZ. See GERMAN.

MEDICAL ASSOCIATION, AMERICAN. A federation of the constituent, or State and Territorial, medical associations, founded in 1847 to "promote the science and art of medicine and the betterment of public health." Members of the association must be members of constituent associations; those in good standing, who have qualified as fellows, constitute the scientific assembly of the association. On Nov. 1, 1935, there were 99,604 members, of whom 62,675 were fellows.

The scientific assembly is divided into 16 sections, each having its own officers who serve for a year. These sections are: Practice of medicine; surgery, general and abdominal; obstetrics, gynecology, and abdominal surgery; ophthalmology; laryngology, otology, and rhinology; pediatrics; pharmacology and therapeutics; pathology and physiology; nervous and mental diseases; dermatology and syphilology; preventive and industrial medicine and public health; urology; orthopedic surgery; gastro-enter-

ology and proctology; radiology; and miscellaneous topics.

The eighty-sixth annual session was held in Atlantic City, N. J., June 10-14, 1935, the house of delegates, in which there are vested the legislative powers of the association, convening on June 10 and the scientific assembly the following day. At the section meetings leading authorities and investigators in the field of medical science announced and discussed the latest discoveries and methods in treating the sick. The scientific exhibit and the technical exhibits were also of great interest.

The officers elected for 1935-36 were: President, James S. McLester, Birmingham, Ala.; president-elect, J. Tate Mason, Seattle, Wash.; vice-president, Kenneth M. Lynch, Charleston, S. C.; secretary and general manager, Olin West, Chicago, Ill.; and treasurer, Herman L. Kretschmer, Chicago, Ill. The official publication is the *Journal of the American Medical Association*, Morris Fishbein, editor. Eight other scientific journals, each dealing with a special field of medicine, as well as *Hygeia*, a health magazine, are published by the association. Headquarters are at 535 North Dearborn Street, Chicago, Ill.

MEDICAL JURISPRUDENCE. A sorry dichotomy has been fostered between two venerable professions—law and medicine. More unfortunate looms the animus between them because of their inherent interdependence in effecting society's greatest good. Without the assistance of medicine, jurists may grope endlessly after the solution of their innumerable problems, which solution is dependent upon medical data. Without the aid of law (whether through legislation or adjudication) many of medicine's foremost contributions to human welfare must remain ineffectual if not utterly inert.

Through Medical Jurisprudence the synthesis of these two important disciplines is gradually being effected. Medical Jurisprudence (as differentiated from forensic medicine with which it is not infrequently confused) considers the "application of expert medical knowledge to the needs of law or justice" (Horst Oertel).

Recent developments in Medical Jurisprudence will be considered under (1) Mental Unsoundness and the Criminal Law, (2) The Curtailment of Human Liberties, (3) The Adaptability of Scientific Tests to Legal Proof. In reviewing these advances due regard must be given to legal as well as medical literature, if any prognostic results are to be derived from the studies herein epitomized.

Mental Unsoundness and the Criminal Law. "The law," said Dean Harno, "if it is to do more than rattle dead bones, if it is to become a vital, useful social fact, must assimilate new truths and new thoughts. The law, since it is society's agency of authority, must interrelate the knowledge of the specialist into a thoroughly wrought and operating device for social service."

The spirit of this challenge underlies *The Family in Court* by City Magistrate Jonah J. Goldstein. In it we are reminded that "Each defendant is a human, with his own problems, his particular background, tradition, family relationships, and economic status," all of which factors constitute the real person. Delinquency should be met with proper psychiatric attention irrespective of the nature of the particular charge. Prevention being far more desirable than cure, more attention should be given the offender than the offense. The causes of delinquency—juvenile and adult—are as innumerable as they are varied. Parental maladjustment

and indifference, poverty, pathological conditions lead among the host of contributing factors. Inexcusable failure to recognize these factors not infrequently fosters the graduation of juvenile delinquents into adult penal institutions, whence emerge more recidivists than reformed convicts.

The majority of recidivists or habitual criminals, it is shown, are not wholly responsible and are more or less psychopathic. Independent researches (*The Laws Concerning the So-called Professional and Habitual Criminal*, by Dr. B. V. A. Roling) prove that by far the greater number of recidivists hale from the lowest strata of society. Punishment must give way to treatment and preventive detention must supersede penal servitude. Before the unscientific injustices of the penal codes and the barbarities of a retributive system can be effaced, the criminogenous structure of society must be improved.

Modifying the views of the Italian criminologist, Cesare Lombroso, Maudsley and his successors have shown the psychic forces in the individual to be more important in the production of the criminal than mere physical defects—as Lombroso had taught. The newer view definitely opposed the old metaphysical and legalistic attitude toward the criminal as a "perverse moral agent" and "deserving of the savage revenge of the society whose rules and institutions he has outraged."

Under the orthodox rule the sole test of criminal responsibility is knowledge of right and wrong, or of the nature of the action. Though still conceding that the etiology of many a mental disorder yet remains shrouded in ignorance and uncertainty and the rôle of these disorders in the transfiguration of personality is still unpredictable, the tendency of recent writings is markedly away from the categorical standards of medieval medicine. The criminal is now viewed by many as a patient requiring the care of a physician as surely as if he were a victim of insanity or tuberculosis. Criminality as an anti-social phenomenon is as readily discernible as is a diagnosable pathologic condition, and this though the disorder affecting the emotional life of the individual leaves his intellectual faculties comparatively unimpaired.

This deviation from the orthodox view of irresponsibility as promulgated in the opinion of the justices in the *McNaughten Case*, has not as yet secured general approval by our courts of last resort. The arguments for the tenacious adherence to the traditional test have variously been expressed as the uncertainty of medical science in its knowledge of and understanding concerning mental disorders—the almost insuperable difficulties in diagnosing genuine mental maladies—the dangers of simulation and malingering, and finally the necessity of safeguarding society generally as against the individual.

Law is dedicated to the promotion of the best interests of society at large. Psychiatry has, within the past half century and more especially during the past 10 years, proved to the satisfaction of many noted jurists that society can be safeguarded and the individual culprits rehabilitated, i.e. that the two objectives are not incompatible, if the factual basis of legal conclusions will be permitted to emerge from the medical sciences, as they are demanded to emerge from other branches of technical learning, engineering, accountancy, art, etc.

Given an understanding of the causes of insanity or acute psychosis as toxic and infective or metabolic, the insidious occurrence of mental disorders will be appreciated as perceptible factors in the perpetration of crime. As is pointed out by Dr.

H. Devine: "a chronic appendix, intestinal stasis and internal infections have all been found from time to time in cases of manic depressive and schizophrenic psychoses. There are times, however, when such chronic infections produce not only slowly developing mental changes but sudden disorders of mental life."

The rôle of emotional disorders in the production of sudden mental aberration cannot be overlooked. Continuing his summation of the acute psychogenetic psychoses, Devine further tells us that "many young people who in adolescence more or less suddenly present mental disorders are suffering from the difficulties of adolescence which are produced by the new forces which well up as a result of sexual maturation. The new balance of the endocrine glands, which must be assumed to take place at puberty, is not arrived at with equal swiftness by all young people. Those who are of a sensitive nature or who have stored up in the mind mental conflicts and who have in addition some abnormality of the sympathetic system, are the candidates for mental disorders when some psychical shock occurs which in the more healthy is quite inadequate to produce disaster."

In *Mentality and the Criminal Law* by O. C. M. Davis, M.D., D.Sc., and F. A. Wilshire, 1935, Kenny (*Outlines of Criminal Law* 12th ed.) is cited in vindication of the *McNaughten Rule* which "has been of immense assistance to judges in giving them a sound basis for their summing up and we submit in no way restricting their right of virtually extending the common law if any special circumstance indicates the necessity for so doing." Davis and Wilshire are of the opinion that "any statutory interference with this judicial privilege would be most detrimental to the furtherance of justice in criminal medico-legal cases."

"The questions put to the judges," says Kenny, "had reference, as we have seen, only to the effect of insane delusions and insane ignorance. But insanity affects not only men's beliefs, but also, and indeed more frequently, their emotions and their wills. Hence since 1843 much discussion has taken place as to the effect of these latter forms of insanity in conferring immunity from criminal responsibility. The result has been that though the doctrines laid down after *McNaughten's* trial remain theoretically unaltered, the practical administration of them affords a wider immunity than their language would at first sight seem to recognize."

"For many forms of insanity, which do not in themselves constitute those particular defects of reason which the judges recognized as conferring exemption from responsibility, are now habitually treated as being sufficient evidence to show that one or other of those exemptive defects are also actually present."

Uncontrollable or irresistible impulses as well as many clinically demonstrable forms of mental derangement have not been afforded the sanctuary of the *McNaughten Rules*—predicated as they are upon the perpetrator's knowledge of the nature and quality of the act and his understanding of its rightness or wrongness. For given no capacity to choose between right and wrong, if his cognitive faculty be present—he is still guilty. Said Mr. Justice Greer: "What I really told the jury was that the definition of insanity in criminal cases was the one laid down by the judges in *McNaughten's Case*, but that men's minds were not divided into separate compartments, and that if a man's will power was destroyed by mental disease it might well be that the disease would so affect his mental

powers as to destroy his power of knowing what he was doing, or of knowing that it was wrong. Uncontrollable impulse in this event would bring the case within the rule laid down in McNaughten's case."

In the recent case of *State v. Simenson*, 262 N.W. 638 (Minn. 1935) an uncontrollable impulse to commit a crime in the mind of one who is conscious of the nature and quality of the act and knows that it is wrong, is not a defense. Whereas in *Hargroves v. State*, 177 S. E. 561 (Ga. 1935) the court held that one is not criminally responsible, though endowed with sufficient reason to distinguish right from wrong as to a particular act about to be committed, where, in consequence of some delusion, his will is overmastered and there is no criminal intent, provided that the act itself is connected with such delusion.

By a liberal construction of the rule, Davis and Wilshire argue that "Since in all criminal trials the decision of the jury must depend upon their interpretation of the evidence before them, they might well consider the contention of an advocate that, since mind is indivisible, a prisoner shown to their satisfaction to exhibit any symptom of insanity, such as the possession of a delusion or uncontrollable impulse, could never in the strictest sense of the words, really fully comprehend the nature and quality of an act—still less its rightness or wrongness."

Alcoholism and Crime. The causal relationship between Alcoholism and Crime—because the tests are all too frequently predicated upon subjective data—is not easily ascertained. According to Lombroso, alcohol is a cause of crime "first, because many commit crimes in order to obtain drink; further, because men sometimes seek in drink the courage necessary to commit crime, or as an excuse of their misdeeds; again, because it is by the aid of drink that young men are drawn into crime; and because the drink shop is the place for the meeting of accomplices, where they not only plan their crimes, but also squander their gains. . . ."

Dr. A. Baldie, discussing tests of drunkenness, defines alcoholic intoxication as "the impairment of physical or mental faculties to such an extent as to render an individual unable to execute safely the occupation on which he is engaged at the material times. Drunkenness is a state of intoxication causing disorders of social behavior or helplessness. Since shock may ordinarily be mistaken for drunkenness, particular note should be made of the differences. In both the pulse is rapid, being weak in shock, but full and bounding in intoxication. The dilated pupil of moderate shock is sensitive to light, but in intoxication, the reflex is usually absent to ordinary light and the reaction to strong light is delayed."

Alcoholism has the deteriorating effect of disturbing coördination. To the undue amount of alcohol in either parent at the time of conception, Healy attributes degeneracy of the offspring. Averting this degeneracy is one of the most important functions of medical jurisprudence.

"As a defense to crime," concludes Smith (*Forensic Medicine*), "insanity induced by alcoholism has been grossly overrated and little reliable evidence has been produced to show that it is a causal factor in any type of insanity except the specific alcoholic insanities, delirium tremens, acute confusional insanities, Korsakow's disease and alcoholic dementia."

Alcoholism acts as a depressant to the central

nervous system. When the dosage is larger, there is a generalized depression resulting in unconsciousness, paralysis, loss of reflexes, and finally death. In smaller doses, it affects the higher centres of the brain. Inhibited impulses, repressed emotions under the influence of alcohol break through. Though less frequently than others, alcoholic psychoses are the cause of precipitating their victims into conflict with the law. Pathologic intoxications, caused by the individual's intolerance toward alcohol; delirium tremens, in which the patient is confused, disoriented, in constant fear and suffering hallucinations; acute hallucinosis, though clear mentally, he becomes apprehensive, and in chronic cases, develops delusions of persecutions; and finally Korsakow's psychoses with its memory defect, replaced by fabrications, little or no insight into his condition and eventual chronic deteriorated state.

Chronic alcoholism is the commonest cause of crimes growing out of sexual jealousy, especially those of a homicidal character. Excessive irritability and increased sexual desire of the alcoholic renders him suspicious of his wife's chastity. His suspicions having been focused upon one individual, every trivial incident is misconstrued to support his delusional belief. Threats of violence, if the woman will not confess, and repeated quarrels generally terminate in his murder of her. "Women with alcoholic insanity," Smith informs us, "generally do not kill their husbands, but often mutilate them or commit suicide."

Under the common law, drunkenness far from being an excuse was held rather to aggravate the offense. American decisions have indicated a tendency to admit drunkenness in evidence, not by way of justification or mitigation of the crime, but as throwing light upon the mental status of the offender. But the evidence to be admitted must be so complete that the defendant at the time of the commission of the crime was incapable of knowing right from wrong. Under statutory modification in some jurisdictions, the drunkenness to be admissible need not be such as to deprive defendant of all power of volition or all ability to form an intent."

The physiological action and effect of alcohol and the tests of drunkenness are ably discussed by Dr. Gerald Slot in the *Medico-Legal and Criminological Review*, October, 1935. In noting general demeanor of the drunken defendant he advises that allowance be made for shock of arrest, and diagnosis of other conditions when the patient is asleep or insensible. The conjunctivæ should be observed, the memory examined and coordination tested, and due consideration be given the fact that "there is no single symptom due to alcohol which cannot be caused by another condition."

From drunkenness to delirium tremens with its tremors and hallucinations born of insanity is a far cry. The English courts generally recognize that delirium tremens is a defense on the ground that it is a secondary, not primary, consequence of drinking. American courts regard it as settled insanity inasmuch as it is not voluntarily generated as a cloak for a particular crime and as a rule may be properly established by medical evidence. The state of the law in the future is forecast by R. U. Singh as not very hopeful. "A modification of the law," he agrees, "would bring into closer harmony moral and legal responsibility. But in view of the serious consequences to society of such a step, it is not likely that the future will witness any broadening of the scope of this defense except insofar as drunkenness comes to be treated as a disease.

There are inebriates who cannot help being such for reasons of a diseased condition of the brain induced by alcohol either voluntarily or on account of the heritage of a neurotic and unstable brain; and it is but fair that law should take as much account as it can in such cases of the factors that may modify or make impossible full responsibility by fettering or preventing normal volition."

Curtailment of Human Liberties. In its zeal to safeguard human liberties the law frequently defends them in the face of imminent social catastrophe. The doctrine of inviolability of the person will countenance no exception, the pleas of medical science to the contrary notwithstanding.

A scientific diagnosis of chronic alcoholism cannot be met with the imposition of penal servitude, for such sentence cannot deter the offender's return to his previous condition inasmuch as his previous condition remains unaltered. In the present stage of medical learning it can readily be predicted that a confirmed drug addict will commit whatever criminal offense may be necessary to satisfy his craving, nor is speculation indulged when one notes that venereal disease will spread infection. By virtue of recent psychiatric advances intermediate states of emotional instability, falling short of complete mental irresponsibility, are readily discernible as potential dangers. In his article on "Recidivism and the Courts" in the *Journal of Criminal Law and Criminology*, September, 1935, p. 368, Harold M. Metcalf points out that "approximately 80 per cent of the inmates of one Ohio penal institution were mentally defective."

The function of the law in such cases is to determine whether the act committed, upon which such punishment is predicated, comes within the statute and whether the accused had actually committed it. The determination of the adaptability of the punishment (i.e. sterilization, therapeutic castration, etc.) is best left to science. Such enhancement of the law's jurisdiction over the person predicated upon scientific determination of preliminary data is not a deprivation of right without "due process of law." If the distinction between normal and abnormal is a scientific reality, society has the right to be protected against the pathologic persons other than the insane, i.e. the psychopathic personalities. The fear of invading personal liberty has been permitted to hamper progress in segregating and preventing from becoming a general menace the feebleminded, the moron, the demented. Since the prevention of any form of disease necessarily involves a consideration of the factors giving rise to it, Dr. Edward Mapother in his lecture on the "Prevention of Mental Disorder," viewing the anomalies of innate make-up, the anomalies of the changes incidental to particular ages or epochs of life, exceptional mental experience—recent or remote—and gross physical influences, considers the advantage of legalized abortion over sterilization. "Legislation," he contends, "can only properly allow voluntary sterilization. The impossibility of defining conditions which are always transmissible militates against such compulsory sterilization as would be scientifically tenable. In the light of the public intolerance of eugenic sterilization, to have it legalized at all, it will certainly be necessary to advocate the association of permission with safeguards so numerous as to render any influence on the collective incidence of mental defect and disorder almost imperceptible." In the case of legalized abortion many of those whose progeny is undesirable would be far more likely to accept operation and all the trouble connected with it on account of an

actually forthcoming child than on account of purely hypothetical ones. . . . Far more might indirectly be achieved if abortion were legalized for economic reasons. It is conceivable that the community might some day revolt against the view that those who are unable to support themselves have an unlimited title to present to the community offspring which are reasonably certain to be on balance liabilities rather than assets.

The legal arguments for sterilization are thus synopsisized by Hinton and Weatherhead (1935): "Whenever the resultant advantage of an operation, whatever its nature, whether transfusion or diagnostic, etc., is greater than the disadvantage of pain, inconvenience, or loss caused by such an operation, then the operation appears to be legal. . . . This explains why therapeutic sterilizations are inside the law. The primary condition necessitating them is a pathological one and the advantages resulting therefrom are greater than the damage to the integrity of the body because the general health of the patient is affected. Where, however, the sole motive is eugenic, whether there is consent or not, it is generally felt that the operation would be illegal, because, it is argued, the intention is not to prevent a more serious disorder or improve the patient's health, but simply to relieve him of a certain amount of responsibility."

In his "Critique of Proposed 'Ideal' Sterilization Legislation," (*Archives of Neurology and Psychiatry*, April, 1935, p. 3), Dr. Abraham Myerson advises the State eugenicist seeking to enact a law requiring the sterilization of cacogenic persons (potential parents of socially inadequate offspring) that he needs must be not a scientist but a clairvoyant. Said Dr. Myerson:

"I know of no scientific data or technic by which the 'cacogenic' person could be detected, and one can only surmise that the proponents of 'ideal' legislation have in mind some technic of supernatural revelation, some crystal ball or Delphic vision, by which the potentialities of any person's germ plasma in the succeeding generations may be ascertained. . . . When the definition of potential parent of socially inadequate offspring is extended to include persons whose progeny do not necessarily show in themselves the inferior qualities but who would transmit them to a third generation, dogmatism becomes an arrogance."

In *Re Opinion of the Justices*, 162 So. 123, Ala. 1935, it was held that a State, in the exercise of its police power, may provide for the sterilization of the mentally diseased, insane, epileptic, mentally deficient, criminal, and delinquent persons, provided proper method is prescribed for ascertainment or adjudication of their status and that, when such status is legally ascertained, sterilization would not amount to "cruel and unjust punishment" within constitutional prohibition (Const. Ala. 1901, § 15).

We think [said the Court] that the sterilization of a person is such an injury to the person as is contemplated by the quoted provision—just as much so as to deprive him of any other faculty, sense, or limb—and that due process of law means that this cannot be done without a hearing on notice before a duly constituted tribunal or board, and, if this is not a court, then with the untrammelled right of appeal to a court for a judicial review from the finding of the board or commission adjudging him a fit subject for sterilization. This right the bill in question denies, or does not reserve; hence is unlike the Virginia statute (Acts 1924, c. 394) dealt with and upheld in the case of *Buck v. Bell*, 274 U.S. 200.

In "The Ameliorative Effects of Therapeutic Castration in Habitual Sex Offenders," (*Journal of Nervous and Mental Diseases*, July, 1935, p. 15; August, p. 180), Dr. A. W. Hackfield reports that for the past three decades "it has been customary at

the University of Zurich Psychiatric Clinic to subject such psychopathic personalities with perverse and inverse tendencies to therapeutic castration provided they presented no other grave psychopathic anomalies." The treatment consisting of a "reduction of the somatic sexual tension through removal of the sex glands so that even in certain cases the post-operatively demonstrable libido does not suffice in the face of normal volition and intellectual control to violate the existing social standards. . . . In properly selected and otherwise incurable male sex offenders, castration (aside from permanent commitment) may be regarded as the only dependable measure for social rehabilitation of such unfortunate individuals."

Acting in conjunction with the proved facts of preventive medicine, law exercises a far-reaching educative influence. Through current legislation, judicial interpretation of common law principles, and the broad powers of equity jurisprudence, laws were promulgated enlarging the schedule of occupational diseases to afford greater security to employees against the hazards of modern industry. In "Health and Human Progress," an essay in *Sociological Medicine* (1935), René Sand of the University of Brussels, reviewing industrial legislation from the edict of Rotari (643) through the functional economy of our own day, points to the improvements of the psychological atmosphere in industry as the most important contribution of industrial psychology. "Every thwarted instinct produces mental reactions manifesting themselves by instability, discontent, and revolt." Enlightened legislation has brought employer and employee together, increasing safety, preventing ill-health, and generally securing to industry the beneficent effects of preventive medicine.

International cooperation in checking illicit traffic in dangerous drugs has indirectly aided in the scientific curbing of crime, as has been pointed out by Quincy Wright in his article on "The Narcotics Convention of 1931" in vol. xxviii, *American Journal of International Law*, p. 475.

The international conventions to control the use of opium and narcotic drugs have been of interest to the United States primarily from the standpoint of their efficiency in combating an acknowledged evil. They also have a more general interest in that they illustrate methods of sumptuary regulation, of economic planning, and of international administration, perhaps capable of application in other fields. Finally, the application of these conventions has raised some problems of general international law. . . . Possibilities of evasion still exist, although the efficiency of administrative controls has been greatly developed since the 1912 convention. Each successive convention has been supplementary to those which preceded it.

In his lecture on "Prevention of Venereal Disease," Dr. L. W. Harrison compares the methods adopted by different countries in preventing venereal diseases through efforts to reduce the amount of extra-marital intercourse, the regulation of prostitution, the use of preventives against contact with infectious secretions during sexual intercourse, destruction of contaminated parts after exposure to infection, prophylactic general treatment after such exposure, and treatment of carriers.

Connecticut, in her new law (*Laws of 1935*, c. 276) follows suit by requiring that all applications for marriage license must bear a statement by a duly licensed physician that the applicant has submitted to a standard blood test.

The Law is a potent factor in man's struggle to improve environmental hygiene through the control of indigenous infectious disease, tuberculosis, and venereal disease, and through safeguarding the health of children and of expectant, parturient, and

nursing mothers. It now projects itself into the nebulous field of reducing accident incidence. In his investigation of accident proneness, Dr. Millais Culpin, through the pursuitmeter test (called æsthe-to-kinetic tests) found that they "yielded significant correlation coefficients between the scores and the accident rates." Through ocular muscle-balance tests he found that "hyperphoria was definitely related to the increased accident rate, while the percentage difference in accident rate between those with and those without eso- or exo-phoria was inconsistent; in one large group, persons with these defects actually had a lower accident rate than those free from them. Intelligence tests produced results that had no relation to accident incidence, but tremor, though occurring in only a few cases, was, as might be expected, correlated therewith." Though these tests are all objective and presumably independent of any personal bias, "psycho-neurotic symptoms—a not unimportant factor in precipitating accidents—has been determined by tests" directly measuring certain qualities regarded as essential to safe and efficient motor driving, i.e. reaction time, resistance to distraction, vigilance, judgment of speed, judgment of spatial relationships, confidence, road behavior, vision, etc.

The Adaptability of Scientific Tests to Legal Proof. The rôle of scientific evidence in the investigation and detection of crime and in identification in civil cases is today undisputed. As authority for this, contemporary writers cite the Federal district court in *Frye v. United States*, 293 Fed. 1013 (D. C. 1923) to the effect that:

Just when a scientific principle of discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone, the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained greater general acceptance in the particular field in which it belongs.

Blood Tests. In "Non-paternity Tests in Civil and Criminal Actions," Dr. Emil F. Koch, writing in *St. Johns Law Review* (December, 1934, p. 102), reminds the defenders of staid legal traditions that

Primarily, the solution of scientific problems is the province of the scientist and not of the lawyer; herein lies the confounding of law and medicine. It is erroneous to assume that the non-paternity test is the subject of fundamental controversy. National and international authorities in science are in agreement as to the technique, interpretation and application of the procedure. The expert, in stating the result of his test, is delivering a scientific, factual proposition to the courts; from this he derives his opinion as to the particular case at bar. The original link in the chain is factual and not an inference in the legal sense. Hence the argument against admission of such evidence as inference expires. The fact that the test operates in the negative is no objection to its admissibility and is in fact more susceptible of probative evaluation than alibi evidence which is concededly admissible. . . .

The importance of the evidence will be appreciated when it is considered that about half the men accused in paternity cases are not true fathers. In an illuminating article, Dr. Alexander Wiener in *Scientific Monthly* for April, 1935, on "Determining Parentage" discusses the constitution of blood. He explains that

the blood is made up of two main factions, the red cells which give the blood its color and a fluid called plasma or serum. In the human red cells there are two substances called agglutinogens A and B. If an individual possesses both of these substances in his blood cells, he is said to belong to group AB; if neither, he belongs to group O; if he possesses only A, to group A; and if he possesses only B, to group B.

The above human blood groups were discovered in 1900 by Dr. Karl Landsteiner of the Rockefeller Institute. The medico-legal application of blood grouping for the exclusion of paternity depends upon the following three important properties of the blood groups: 1, the blood group

of any individual can be determined at birth or shortly thereafter; 2, the blood group of any individual remains constant throughout life and does not change regardless of age, disease, medication, etc.; 3, the blood groups are inherited in accordance with Mendel's laws.

The application of this knowledge to legal problems is well illustrated by a recent case tried in the Court of Common Pleas of New Haven County in which a woman falsely accused the defendant of the paternity of her illegitimate child. Dr. Wiener's analysis of the bloods indicated that the man belonged to group A, the woman to group O, and the child to group B. Since the child possessed the agglutinin B not present in the mother's blood, the true father could belong to group B or group AB. Confronted with this evidence the plaintiff withdrew her charge and the man was acquitted.

Blood Pressure Test. In a recent Wisconsin case reported in the *Journal of Criminal Law and Criminology*, March-April, 1935, the Keeler-Polygraph was admitted, but only as a result of a stipulation and agreement between prosecution and defense counsel. The evidence was held admissible only for its corroborative effect and not as the sole indication of guilt. The reason offered by the court in *United States v. Frye* supra was that "we think that the systolic blood pressure deception test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting evidence deduced from the discovery, development, and experiments thus far made."

Fingerprints. Concealing identity by means of plastic surgery has recently aroused widespread interest since the post-mortem examination of the body of John Dillinger disclosed that efforts had been made to alter the bulbs of his fingers and that operations had been performed on his face in an effort to obscure his identity. Fingerprints unquestionably furnish an absolute method for establishing the identity of criminals and have long been recognized by courts of last resort. Thus in *U.S. v. Kelly* 55 F. (2d) 67, the fingerprints of the defendant arrested for selling a quart of gin in violation of the National Prohibition Act, were taken without his consent on the day of his arrest and before arraignment. To the defense that the right to take fingerprints was without statutory authority—Federal or State—and subjected "a possible misdemeanant before trial and conviction" to unnecessary indignity, the court said:

The appellee argues that many of the statutes and decisions in common-law States have allowed fingerprinting only in cases of felonies. But, as a means of identification it is just as useful and important where the offense is a misdemeanor, and we can see no valid basis for the differentiation. In neither case does the interference with the person seem sufficient to warrant a court in holding fingerprinting unjustifiable. . . . Fingerprinting is used in numerous branches of business and civil service, and is not of itself a badge of crime. As a physical invasion it amounts to almost nothing, and as a humiliation it can never amount to as much as that caused by the publicity attending a sensational indictment to which innocent men may have to submit.

But, unless the suspect is apprehended, sight recognition is all that remains on which the police may make an arrest. In "The Plastic Surgeon and Crime," Dr. Jacques W. Maliniak (26 *Journal of Criminal Law and Criminology*, November, 1935, p. 594) recounts the many obstacles in the way of sight recognition: manner of dress, gain or loss of weight, difference in expression, hair dyes, use of spectacles, addition or elimination of a beard or mustache, and possible resemblance between two utterly unrelated persons. By plastic surgery, the topography of the forehead, the prominence of the nose, the contour of adjoining parts, the chin and

the ears can be almost unnoticeably altered. The endo-nasal incisions on the mucous membrane following rhinoplasty, like the many other reconstructed alterations so readily accomplished by plastic surgery, intensify the difficulties attendant upon criminal identification. Warning the surgeon of his responsibility in such cases, J. Edgar Hoover (*Journal of the American Medical Association*, May, 1935, p. 1663) says:

With due consideration for the confidential relationship between doctor and patient, the surgeon should not permit himself to be used to further the ulterior motives of criminals seeking to evade apprehension. It has become increasingly incumbent on the plastic surgeon to scrutinize carefully the motives of patients in consulting him. The slight additional burden which this may impose is greatly outweighed by the public interest involved.

Retina. Because plastic surgery is being utilized to defeat justice—by changing facial contours, removing scars, etc.—fingerprints, urged Harold Cummins (25 *Journal of Criminal Law and Criminology* 982), should be supplemented by prints of the palms and soles, for such prints in the record would practically insure against a defeated identification, especially since fingerprints can be forged.

The more adequately to cope with this interference by plastic surgery, an adjunct to the fingerprint system has been devised and completed during the past year by Drs. Carlton Simon and Isadore Goldstein. This method is based upon the correlation of the optic nerve with the many variations of patterns made by the network of the blood vessels of the retina or background of the human eye. Discussing the significance of their discovery in the *New York State Journal of Medicine* (Sept. 15, 1935, p. 901), they say:

With the use of a retinal camera, an instrument that has been used for the diagnosis of various eye diseases, the optic nerve and the net work of blood vessels of the retina or background of the eye can be expeditiously photographed through the pupil of the eye. This requires no special medical skill nor experience, but is an easy mechanical procedure. Although such photographs were readily secured, there was no provision or contrivance by which the background of the eye, with its irregular patterns created by the branching of the blood vessels, could be charted, measured, and classified. For purposes of identification, it was necessary that various differences in individual eyes be noted in numerical values. . . .

What is true of the fingerprint system is also true of this new system, in that no two individuals have the same identification patterns. The many and the great variety of blood vessel configurations make it a mathematical certainty that no two retinal formations are identical. In thousands of photographs, none has been found the same. Age and disease may change in tortuosity the lumen of the blood vessels, but their position and their correlation remain unchanged through life, and, what is of greatest interest, they cannot be altered or effaced.

Sinus Prints. From Sir Logan Turner's study of *The Racial Characteristics of the Frontal Sinuses*, based upon an examination of 578 skulls, another method of individual identification is reported by Dr. Joseph Mayer in the *Virginia Medical Monthly*, December, 1935. According to Dr. Mayer, Dr. Thomas A. Poole, internationally known sinus specialist, having critically examined thousands of sinus prints

has found that no two sinus configurations are precisely alike, but he has also observed that there are in the sinus conformations various bases for classification of types and sub-types, which may, in the end, provide a simpler method for indexing and identifying a particular individual than is provided by the loops and whorls of the finger tips. For one thing, there is much more variation in the architecture of the sinus structures than there is in finger-tip patterns. For another thing, many more kinds of measurement can be applied to a sinus print. At least four basic sinus characteristics may be noted around which innumerable special measurements can be developed: (1) the height and breadth of the cavities; (2) the presence or absence of one or both of the frontals; (3) symmetrical or asymmetrical sinus positions; (4) the position and deviation of the septum.

So far as concerns the possibility of changing the sinus pattern with which the individual is born, there is absolutely no way of making alterations once the pattern is established, as long as the person remains alive. And, after death, there is no more durable portion of the bony structure than this very sinus configuration. It remains the same as long as the skull lasts.

See BIOLOGICAL CHEMISTRY.

MEDICINE AND SURGERY. Essential Hypertension, Surgical Treatment of. Essential hypertension is a disease whose prognosis is exceedingly grave. In patients below middle age it may run its course as rapidly and inexorably as a malignant growth. Medical treatment has had little to offer the victims of this malady. Recently it has seemed justifiable to attempt to control the progress of the disease by major surgical measures, and while the efficacy of this form of therapy is not yet definitely established, the early results are suggestively favorable.

The modern conception of essential hypertension, according to G. E. Brown in a recent review (*Ann. of Int. Med.* 9: 488, 1935) is that the fundamental abnormality is an "inherited hypersensitivity of the vasomotor mechanism," which eventually results in a hypertrophy of the muscular coat of the arterioles and an elevation of blood pressure. If the vasomotor nerve supply of a large proportion of the arteriolar bed should be interrupted, he points out, there would be reason to expect a decrease in blood pressure in those cases in which organic changes in the arterioles was not too far advanced. That vasodilatation of the extremities occurs after sympathetic ganglionectomy, which interrupts the path of the vasoconstrictor impulses, has been proved experimentally; and in fact ganglionectomy has been of value clinically in the treatment of certain types of peripheral vascular disease.

The problem of essential hypertension has been attacked surgically in three ways. The first method, based on the theory that increased amounts of epinephrine ("adrenalin") are associated with the production of the elevation of blood pressure, aimed at diminishing the secretion of the suprarenal glands by "denervation" or partial resection. There is no positive experimental evidence to support this theory, and Brown is inclined to believe that the proof that such procedures have any clinical efficacy is yet to be presented. Resection of the splanchnic nerves, which carry sympathetic fibres to the viscera, has been tried, but it has not yet been clearly shown that such procedures result in a definite lowering of the blood pressure levels and responses over a long period of time, although they may result in symptomatic improvement.

More promising results have been obtained by a considerably more drastic procedure, section of the anterior spinal nerve roots (anterior rhizotomy), which is based on the work of Bradford who showed in 1889 that stimulation of the anterior nerve roots from the level of the sixth dorsal to the second lumbar caused an increase in blood pressure—produced, we know now, by a constriction of the arterioles of the abdominal viscera. This operation interrupts all the sympathetic fibres below the diaphragm, including those to the lower extremity. It is also followed, of course, by paralysis of the muscles of the abdominal wall due to the severance of the motor fibres in the anterior root.

Heuer and Page in New York have, among others, been interested in this method of treating essential hypertension, and Heuer has briefly reported their experience with it (*Ann. Surg.* 102, 1073, 1935). At the time of the report (Feb. 13, 1935), nine patients had been treated by anterior

rhizotomy. There was one operative death, and one patient, whose operation had to be abandoned after only a few nerve roots were divided, died four months later. The remaining seven patients have done well, and have had a reduction of their blood pressure to practically normal levels. The first operation was done in May, 1934, so that at the time of their report, none of their cases had been followed as long as one year. There is no question, however, but that the early results are encouraging. In Heuer's experience, the paralysis of the abdominal muscles following rhizotomy has been of little consequence to the patient, and the only other disturbing result of the loss of sympathetic innervation was a transient paralysis of the bladder and bowel. The number of nerve roots sectioned varied in the different cases and in only one instance were all the roots from the sixth dorsal to second thoracic divided.

Brown points out that while the ultimate effects of anterior rhizotomy have not yet been determined, the only type of patient suitable for this radical form of therapy would be one below 50 years of age with marked hypertension, yet without evidence of renal, cardiac, or cerebral insufficiency; and further that in order to determine the ultimate value of the procedure careful and critical determinations of the blood pressure levels must be carried out over a long period of time.

Heart. Development of New Blood Supply to Heart by Operation. In a series of recent publications, Beck and his co-workers at the Western Reserve University School of Medicine have reported the results of their experimental studies on the production of a collateral blood supply to the heart, and have described the clinical application of their work in a small group of cases. (*Proc. Soc. Exp. Biol. and Med.* 32: 759, 1935; *Am. Heart Jr.* 10: 849, 1935; *idem* 10: 864, 1935; *Ann. Surg.* 102: 801, 1935.)

The heart is, as Beck points out, peculiarly vulnerable for two reasons to any interference with its source of nutrition and oxygen. Its blood supply is furnished by but two arteries, and these are of relatively small calibre (the right and left coronary arteries). It is possible that an additional, though certainly unimportant, source of blood is afforded by small vessels entering directly into the left ventricle ("Thebesian vessels"), and by anastomoses between the coronary arteries and small vessels at the base of the heart ("extra-cardiac anastomoses"). Furthermore, because of its envelopment in a smooth glistening membranous sac (the pericardium), the heart is effectually separated from the structures which surround it in the thorax, and in case of injury to the coronary vessels, cannot develop a collateral circulation except through the relatively avascular tissues at its base. For this reason, sudden complete occlusion of a coronary artery is almost always followed by irreparable damage to the myocardium. In the last two decades, the importance of arteriosclerotic occlusion of the coronary arteries as a cause of angina pectoris and of sudden cardiac death has been fully recognized, and its alarming frequency of occurrence noted. Beck's work, which promises to afford a new method of attacking occlusive coronary heart disease directly at its source, is therefore of considerable interest and importance.

The question which these workers posed was as follows: will it be possible by removing the mesothelial envelope which surrounds the heart and by joining adjacent fairly vascular structures directly to the exposed myocardium to cause new vessels

to grow into the heart muscle and thus create a new blood supply. That such might be the case was suggested by the fact that new blood vessels had been noted in experimentally produced adhesions between the heart and pericardium, and also clinically in cases of adhesive pericarditis. Furthermore, a few clinical cases had been reported in which complete occlusion of both coronary vessels had occurred, but apparently the process had been such a slow one that a collateral circulation adequate to maintain life had been developed through the extra-cardiac anastomoses previously mentioned.

In their first experiments, Beck and Tichey created a collateral vascular bed by removing the epicardium and the lining of the parietal pericardium, and then bringing the more vascular outer layer of the pericardium and the pericardial fat into contact with the denuded myocardium. These experiments showed, first, that new vessels did actually grow into the heart muscle, and second, that by virtue of the possession of this new source of blood supply, the heart could withstand the effects of complete occlusion of both coronary vessels (if the occlusion were brought about gradually). It was furthermore noted that in order for any significant vascular anastomosis to occur, a reduction of the normal blood flow to the heart was necessary. In other words, a need for the additional blood supply must be created before it would develop. This was brought about experimentally by the progressive compression of small silver clips placed about the coronary vessels.

Subsequent experimental studies by Beck, Bright, and Maltby dealt with the effects of approximating pedicle grafts of muscle from the chest wall to the heart, and with the use of the omentum as a source of blood supply. From these studies it was learned: first, that anastomosis between skeletal and cardiac muscle will readily develop if the normal blood supply to the heart has been reduced; second, that the collateral vascular bed thus created affords a partial, though not complete protection against sudden ligation of a major coronary vessel; third, that if the occlusion is brought about gradually, the protection is almost invariably complete; and fourth, that the collateral vascular bed, by transporting blood from one part of the myocardium where the supply is adequate to another part where the supply is inadequate, acts as an anastomotic bridge which will protect the heart from the very frequently fatal consequences of even localized ischemia. It was further observed that the adhesions to the heart, experimentally created, in no way interfered with its normal movement.

With these experimental observations in mind, Moritz and Beck studied the autopsy material in 94 cases of coronary occlusion. They found that the diagnosis in 80 of the 94 cases could be made during life. Furthermore, only 14 of the 94 cases died as a direct result of the first major coronary occlusion. In 37 of the 80 cases surviving the initial insult, the risk of the operation for creating a new blood supply was too great because of concomitant disease or continued cardiac incompetence. The remaining 43 would have been fair operative risks. And significantly enough, of this 43, only 7 died of causes other than subsequent coronary occlusion. They concluded, "These data, chiefly pathological, derived from the study of major coronary arterial occlusion, would indicate that there was a period after the first coronary occlusion in the lives of 43 individuals when the production of extra-cardiac

coronary collateral circulation might have been feasible and beneficial."

As a result of these studies, Beck decided he would be justified in attempting to create a new blood supply to the heart in a suitable patient suffering from coronary sclerosis. Such a patient was found, and he agreed to submit to the procedure, even though its novelty was explained to him. On Feb. 13, 1935, then, Beck undertook the first operation of its type ever performed on the human heart. The left pectoral muscle was mobilized by the division of its insertion, the thorax was opened, the pericardium was widely incised, the lining of the pericardium was roughened, the epicardium was removed with a burr, and then a pedicle graft of the pectoral muscles was brought into contact with the surface of the heart and sutured in place. Finally, the medial border of the divided pectoral muscle was sutured to the parietal pericardium, and the wound closed. The patient, a man of 48, stood the procedure well and made a good recovery. At the time of Beck's report seven months had elapsed since the operation, and the patient had apparently been definitely benefited. Whereas before operation he was subject to attacks of severe precordial pain on exertion, fairly typical of angina pectoris, since operation he had been entirely free of pain and had worked as a gardener.

The procedure has been subsequently applied in six additional cases. The second patient died one week after operation of a cause not clearly related to the operative procedure. The third and fourth patients seem to show definite improvement following the operation, though neither can be said to be "cured." Insufficient time has elapsed in the remaining cases to permit any estimation of the results.

Neuron Lesions, Upper Motor. The application in recent years of modern neurosurgical methods to the experimental study of the physiology of the nervous system has been productive of very fruitful results. This is particularly true in the case of the cerebral cortex which lends itself admirably to accurate extirpation studies. Several groups of workers, and of these notably Fulton and his associates of the Department of Physiology of the Yale University School of Medicine, have re-investigated the problems of cortical function by the use of these refined technical methods on the higher primates, and have described their results in clinical terms. Their work, which has thrown new light on many aspects of the physiology of the nervous system and which has, as well, served to clarify certain clinical problems, deserves notice in a review of this sort, even though it must necessarily be described in rather technical language. One aspect of their investigation deals with a form of paralysis, described as of the "upper motor neuron" type—a type exemplified by the hemiplegia associated with cerebral hemorrhage.

Loss of voluntary power may be due either to a disturbance of the central or the peripheral nervous systems. If the lesion involves the neuron having its origin in the anterior horn of the spinal cord and its termination in striated muscle, it is said to be of the "lower motor neuron" type; if the lesion involves any part of the pathway from the cerebral cortex to the anterior horn cell, it is said to be of the "upper motor neuron" type. The symptoms of the first type of lesion are those which occur when a motor nerve is cut. They are well understood. Fulton and Viets now point out that lesions of the second type are not as simple as formerly supposed—that injury to the premotor

projection area of the cortex is responsible for certain phenomena associated with paralysis of the "upper motor neuron" type. (*Jr. Am. Med. Ass'n.* 104: 357, 1935.)

As the result of experimental studies of the extirpation of localized areas of the cortex in monkeys and apes, as well as observation of the changes following therapeutic excision of cortical lesions in man (tumor, scar, etc.), they conclude that definite syndromes are associated with the premotor area as well as with the motor area which may be defined clinically. "Lesions restricted to the pyramidal tracts or to their cells of origin cause flaccid motor paralysis, muscle atrophy, transient depression of all reflexes, and the positive signs of Babinski and Chaddock. After complete destruction of the pyramids the signs of Babinski and Chaddock persist permanently but the paralysis, flaccidity, and reflex changes tend with time to disappear."

"Lesions of the premotor projection area of the cortex, which also mediate voluntary movements, give rise to spastic paralysis, disturbance of skilled movements, forced grasping, vasomotor disturbances, increased deep reflexes and the signs of Rossolimo, Mendel-Bechterew, and Hoffman. Forced grasping and vasomotor disturbances are transient, but disturbances of skilled movements, and the signs of Rossolimo and Hoffman tend to persist."

Stated in somewhat simpler terms, they have shown that voluntary motor power is mediated not only by the motor area of the brain, as formerly supposed, but by an area in the cerebral cortex immediately anterior to it, the so-called premotor area; and furthermore that each of these cortical areas is responsible for different aspects of normal motor function. The motor area (pyramidal system) is concerned with the contraction of individual muscles, while the premotor area seems to be concerned with the more complex contractile interrelationship between muscle groups (such as are associated with skilled movement of any sort), and with muscle tonus and vasomotor activity.

From the clinical point of view this study is important for two reasons. In the first place, the description of syndromes associated with each of these cortical areas may be of help in the localization of intra-cranial lesions (especially tumor). Furthermore, in cases of hemiplegia, it may offer help in determining the prognosis. By separating, in the general symptomatology of the hemiplegic patient, those components which are due to injury of fibres of the pyramidal system, from those due to injury of fibres from the premotor cortex, one may obtain some idea as to the relative degree of involvement of each. The prognosis is best when only fibres from the premotor cortex are involved by the hemorrhage, next best when the pyramidal system alone is involved, and worst of course when both sets of nerve fibres have been destroyed.

Poliomyelitis. Poliomyelitis is an acute infectious disease, the causative agent of which is a filterable virus as Flexner demonstrated in 1913. It attacks primarily children, and is characterized pathologically by destructive changes in the anterior horns of the gray matter of the spinal cord. These are responsible for the paralyses which usually attend the disease. Sporadic cases occur from time to time, but usually in the late summer or early fall there is an increase in the incidence of the disease. In 1935 the seasonal increase was so great as to definitely attain epidemic proportions. Previous major outbreaks in the United States occurred

in 1931, particularly in the East, and in 1934 in California.

According to statistics collected by the United States Public Health Service, during the four weeks ending June 15, 1935, 240 cases of poliomyelitis were reported, as contrasted with 92 the previous month. This represented a definitely greater than seasonal increase in the incidence of the disease. Almost half the cases reported (117) occurred in North Carolina, which apparently was the centre of the epidemic. In the next four weeks period (ending July 13) the number of cases reported had grown to 653. By August 10, the number of cases reported in the preceding period had increased to 1433, which was 38 per cent greater than for the same period in 1934, during which the epidemic in California had been in progress, and was one half as great as for the corresponding period in 1931 (Eastern epidemic). By this time the epidemic had spread widely along the Atlantic seaboard. Of the total of 3118 cases reported in the previous 16 weeks, 1955 or roughly two-thirds had been in North Carolina, Virginia, New York, and Massachusetts. The peak of the epidemic was reached in August. For the four weeks preceding September 7, 3625 cases were reported (three times greater than for the corresponding period in 1934, but less than the 4936 cases in 1931). For this period, 311 cases were reported from Michigan and 141 from Kentucky. By October 5, the epidemic had definitely begun to wane (2528 cases). By November 2, the number of cases reported had fallen to 1039, but was still 50 per cent greater than in 1934.

The question of vaccination against poliomyelitis is one which was of especial interest during 1935. Two investigators, Brodie of New York University and Kolmer of Temple University in Philadelphia, have prepared vaccines which they believe to be of value in the prevention of poliomyelitis. The efficacy of these vaccines has been sharply attacked and the safety of their administration questioned by Rivers and Flexner of the Rockefeller Institute and Leake of the United States Public Health Service. The available evidence seems inadequate to allow of any definitive opinion concerning either the safety or value of either of the vaccines in the prevention of poliomyelitis, but no doubt further experimentation and subsequent clinical trial will settle the issue.

Brodie and Parks pointed out that since in their experience convalescent serum is inefficacious in the treatment of preparalytic poliomyelitis, and since isolation to prevent contact infection is impracticable because of the probable high carrier rate, it would seem that the best means of controlling the disease would be with a vaccine. That immunization might be possible was suggested by the rarity of second infections in man and the known presence of antibodies in the serum of convalescent patients and experimental animals. Furthermore, the increased immunity enjoyed by adults is, they believe, due to exposure to the virus (with sub-clinical infections) and represents immunization by a natural process (*Jr. Am. Md. Ass'n.*, 105: 1089, 1935). For artificial immunization, the virus would have to be so attenuated as to be incapable of producing the disease, and yet still must retain its antigenic properties.

Brodie's vaccine was prepared by treating infectious monkey cord with solution of formaldehyde. He found that the virus (20 per cent suspension of cord) could be just inactivated by treating it with a 0.1 per cent solution of formaldehyde for 8 to 12

hrs. at 37°C. He previously had tried and abandoned the injection of subinfective doses of active virus because of the danger of infection, and of virus-serum mixtures because of the difficulty of exact neutralization. 5 c.c. of the formaldehyde-virus mixture proved sufficiently antigenic to produce a fairly marked degree of immunity in monkeys. That the vaccine was noninfective Brodie felt proved by the results of his animal experiments and by his experience with 2300 human immunizations.

Brodie and Park studied antibody formation in 75 children after immunization and found that antibodies could usually be demonstrated as early as one week after the injection of the vaccine. The antibody production reached its full development in three to four weeks, and in some cases persisted as long as eight months. It was greater in amount following two doses, than after one.

Kolmer, believing that a living though attenuated virus would be a more satisfactory immunizing agent than virus killed by chemicals (such as Brodie's), prepared a vaccine consisting of 4 per cent emulsion of spinal cord in a 1 per cent solution of sodium ricinoleate (*Jr. Am. Med. Ass'n*, 105: 1956, 1935). With this vaccine containing living, attenuated virus he succeeded in immunizing all of 42 monkeys with no ill effects, and noted a good antibody response. Next, 25 children varying between 8 months and 11 years in age were inoculated with three doses of vaccine at weekly intervals. There were no ill effects from the vaccination and 84 per cent responded by the production of antibody. At the time of his report 446 additional individuals had been safely immunized at Temple University Hospital. Kolmer's serum was sent to various physicians in 36 States during the recent epidemic, who administered it to approximately 10,000 persons, mostly children. No individual receiving three doses contracted the disease, but 10 receiving one or two doses did so. These probably represent cases in which the vaccine was given during the incubation period too late to abort the disease, Kolmer believes, though a very different view is held by Leake, as we shall see.

Concerning the safety of his vaccine Kolmer says, "attenuation of the virus in the vaccine along with the fact that the first dose is quite small per body weight, with an interval of at least a week for antibody production before the second and third doses are given, appears to constitute important factors in safety. Furthermore, it may be that the remote monkey passage virus used in the preparation of the vaccine is of greatly reduced infectivity for human beings and that subcutaneous injections represent a portal of entry unsuited to infection, since it is difficult to infect monkeys with straight virus by this route."

Papers by Dr. Brodie and Dr. Kolmer were presented before the 1935 meeting of the American Public Health Association in Milwaukee. The transcript of the proceedings of this meeting is not yet available, but according to a report in the *Journal of the American Medical Association* (105: 1275, 1935), the value of both vaccines was strongly deprecated in discussion by Dr. Rivers of the Rockefeller Institute and Dr. Leake of the United States Public Health Service. Rivers contended that the Kolmer vaccine was dangerous because of the presence of free virus, and that the value of Brodie's vaccine had not been demonstrated, and that theoretically it could be of no value.

Leake in a special article in the *Journal* (105: 2152; December 28, 1935) reported that 12 cases

of paralytic poliomyelitis had occurred at a suggestive interval after the injection of vaccine with a high fatality rate (50 per cent). That these are not merely chance occurrences of the disease is suggested, first by the number of cases reported. According to Leake paralytic poliomyelitis was not epidemic in any of the localities at the time of occurrence of these cases, and even "during the heaviest incidence of poliomyelitis in the community with the highest reported incidence, the expectation of paralytic poliomyelitis within three weeks following vaccination . . . was less than one-tenth of a case. . . ." Second, by the rather definite interval between injection and the onset of symptoms (6-14 days), which would seem very difficult to explain on a chance basis. And third, and perhaps most significantly, by the fact that "in every case in which the sequence is known, the level of the spinal cord affected corresponded to the extremity in which the injection was made, paralysis beginning either in the same limb or in the contra-lateral limb." Leake feels that the high mortality in this group of cases may be due in part to the fact that the part of the cord first involved (usually that which carries the nerve supply to the arms) lies so close to the nuclei of the muscles of respiration. He suggests further the possibility that a strain of poliomyelitis virus that has been subjected to prolonged monkey passage, with rather short incubation periods, is unusually virulent to man when injected into or beneath the skin. He further refers to the finding of Schultz and Gebhardt, that the appearance of neutralizing antibodies in the blood after the injection of the poliomyelitis virus is very uncertain evidence of parallel immunity to the natural disease.

Dr. Simon Flexner of the Rockefeller Institute, the discoverer of the virus of poliomyelitis and probably the leading student of the disease in this country, wrote a special article for *Science* (82: 420; November 1, 1935) in which he maintained that at present there is no evidence available that artificial immunization against poliomyelitis may be both safe and effective. His conclusion may be directly quoted:

1 No adequate evidence has been presented showing that through the action of physical and chemical agents the virus of poliomyelitis may be attenuated so as to preserve its immunizing properties, while being deprived of its potential paralyzing power

2 The available evidence indicates that virus exposed to injurious physical and chemical agents is either inactivated (destroyed) or merely reduced in concentration. When the virus is actually destroyed, it no longer possesses immunizing power; when it is reduced in concentration, it immunizes certain animals and may paralyze others. The proof that the treated active virus has not been attenuated is provided by the recovery of fully active virus from the paralyzed animals

3. No evidence exists showing that the passage of virus through monkeys removes its power to infect and produce paralysis in man. On the contrary, we possess convincing observations which show that an indeterminate number of passages of virus through human beings does not deprive it of its potential paralyzing effect when injected into monkeys.

Another interesting aspect of the pathogenesis of poliomyelitis relates to the rôle of the olfactory tract as a portal of entry for the virus. The *Journal of the American Medical Association* has presented a review of the recent work in this field (105: 1986, 1935). Flexner and Clark showed in their early work on poliomyelitis that monkeys could be successfully injected by intra-nasal instillation of the virus, and furthermore the virus has been recovered from the nasopharynx both in man and in the experimental animal. In 1934 Schultz and Gebhardt found that section of the olfactory

nerves with the electric cautery protected monkeys against the effects of intra-nasal instillations of the virus—rather clear evidence it would seem that the virus ordinarily gains access to the central nerve system by traveling up the olfactory paths. Lennette and Hudson have recently confirmed and amplified the work of Schultz and Gebhardt (*Proc. Soc. Exp. Biol. & Med.* 32: 1444; January, 1935). They found that not only did section of the olfactory tract protect against the introduction of the virus into the nose, but that protection was likewise afforded against the intravenous injection of the virus. Of five normal and five operated monkeys subjected to intravenous inoculation with the virus on three successive days, four of the control animals and none of the operated ones developed the disease. This suggested that following intravenous injection the virus was excreted from the blood stream into the nose, and there gained entry to the nervous system by way of the olfactory nerves. That this is actually the case is suggested by the fact that they were successful in finding the virus in nasopharyngeal washings following its intravenous injection.

Armstrong and Harrison have reported (*Pub. Health Rep.* 50: 725; May 31, 1935) that the intranasal insufflation of alum (1.5 c.c. of 4 per cent sodium aluminum sulphate) has a protective effect against infection with the poliomyelitis virus. Of 24 alum prepared monkeys, inoculated intranasally with the virus, only 6 died; whereas 16 of 20 controlled animals succumbed. The authors believe that their results are probably to be explained by a decreased permeability of the nasal mucous membranes produced by the alum, rather than by any antiseptic effect. It is conceivable that some such procedures as this may later prove to have clinical value.

It might be mentioned that at least one worker in this country, Toomey of Western Reserve University, feels that experimental poliomyelitis as produced by the intra-nasal or intra-cerebral injection of virus in monkeys is not at all comparable with the disease in man; and that both from its clinical course, and on experimental grounds, one must suppose that the virus has its portal of entry in the gastro-intestinal tract and reaches the cord by way of the sympathetic nervous system (*Science* 82: 200, 1935).

Ulcers. Etiology of Peptic Ulcer. The cause of so-called peptic ulcers, that is, chronic ulcers of the stomach and duodenum, is a problem which has attracted the interest of medical men since the time of John Hunter. In spite of the vast amount of work which has been done in this field, it must be admitted that the final answer is still unavailable. Yet, largely as the result of a renewed interest in the question during the past 15 years, certain facts concerning the pathogenesis of ulcer have become well established, and it seems that a promising beginning has been made towards the eventual solution of the problem. It now appears likely that we must look to the digestive action of the gastric secretion as the most important factor in the production of ulceration.

The editors of the *Journal of the American Medical Association* have recently given us an excellent historical résumé of the various theories which were advanced concerning the etiology of ulcer (104: 1637, 1935). Virchow and Hausen in 1853 suggested that occlusion of terminal blood vessels in the stomach caused small areas of necrosis which were susceptible to the digestive action of the gastric juice. Recent extensive histological studies of

material made available by the wave of enthusiasm, especially in Germany, for gastric resection in the treatment of ulcer has failed to confirm this view. Konjetzny, and others, failed to find any evidence of disturbance of blood vessels, but were impressed by the extensive inflammatory changes which they observed throughout the stomach, even in areas covered by normal mucosa, and advanced the theory that inflammatory gastritis and duodenitis were the most important factors in the production of ulceration.

Von Bergmann, and Eppinger and Hess, suggested that the ulcers were caused by spasm of localized areas of the stomach wall brought on by excessive nervous stimulation, but their "neurogenic-spasmogenic" theory has failed of confirmation in experimental studies. (There is, however, but little question that nervous factors play some part in the production of ulcer in man.)

Aschoff advanced a "mechanical-functional" theory. He pointed out that ulcers occurred most frequently on the lesser curvature of the stomach and in the duodenum, and attributed this to the fact that these areas along which, according to Waldeyer, most of the ingested food moves, are more exposed to mechanical and chemical trauma. More recent X-ray studies, however, do not support the earlier view of Waldeyer that the lesser curvature is the main gastric channel or "Magenstrasse."

The production of ulcers in the normal stomachs of experimental animals by measures which increase the amount of gastric juice and its digestive capacity have been reported by Burkle-de la Camp, who subjected animals to starvation and the injection of histamine, a powerful stimulant of gastric secretion. Likewise, Silbermann was able to produce ulcers by stimulating gastric secretion reflexly. He made esophageal fistulas in dogs, and gave them sham feedings, thus inducing the flow of gastric juice by psychic stimulation, while at the same time food was prevented from entering the stomach.

In this country, Dragstedt of the University of Chicago, one of the leading students of the ulcer problem, has come to a similar conclusion—that the digestive action of pure gastric juice is the chief factor involved in the production of ulcer. In an interesting paper presented at the annual meeting of the American Surgical Association he summarized the results of his experimental studies which have been carried on over a number of years. (*Ann. Surg.* 102: 563, 1935.)

That it is the digestive action of pure gastric juice, rather than that of the ordinary contents of the stomach, which is responsible for the digestion of living tissue was shown by an interesting series of experiments in which sections of various portions of the gastro-intestinal tract, and such viscera as the spleen, kidney, and pancreas, were sutured into a large defect in the stomach wall. In the case of the normal stomach, no digestion of the abnormally exposed tissues occurred. However, when these same tissues were sutured into a window in an isolated stomach pouch (so produced that it would be excluded from the ordinary gastric circuit, and therefore would contain pure, undiluted gastric juice), digestion occurred in every instance. The mucosa of the small intestine proved to be more resistant than the other viscera, and the mucosa of the proximal part of the intestinal tract more resistant than that of the distal, as might be expected because of its proximity to the stomach.

Furthermore, when pure gastric juice was caused to flow into the empty jejunum or ileum, as

it may experimentally by anastomosing an isolated stomach pouch to the small intestine, digestion of the bowel occurred. And finally, when the entire stomach was isolated from the gastro-intestinal tract, and the gastric juice was prevented from draining away promptly, digestion of the mucosa of the stomach itself occurred. Interestingly enough, the isolated stomach was found to secrete a very large quantity of gastric juice (2000 c.c. in 24 hours) with an acidity much greater than that of the normal fasting stomach (100-140 clinical units of acid against 30-60) and a pepsin content three times as great. Histological examination of the stomach wall of these animals showed a picture of chronic gastritis very similar to that which Konjetzny described as associated with ulcer in man.

The factor chiefly responsible for the digestive action of pure gastric juice on living tissue seems to be its high acid concentration rather than an increased pepsin content. So that, in Dragstedt's opinion, "peptic" ulcers might more properly be called "acid" ulcers.

If we grant that pure gastric juice is capable of digesting the stomach and duodenal wall, under what conditions may this digestion be expected to occur in man? Normally, digestion does not occur because pure gastric juice does not accumulate. It is neutralized by saliva, absorbed by ingested food, and probably neutralized by a reflux of alkaline pancreatic juice through the pylorus. Finally, in a normally motile stomach, food is passed on into the duodenum before it is saturated with acid. Anything which may disturb the emptying of the stomach, such as spasm or stenosis of the pylorus, will allow the gastric secretion to accumulate until its acid content may approximate that of pure gastric juice. It is Dragstedt's opinion that the major factor in determining the chronicity of ulcer near the pylorus is this factor of delayed emptying. Furthermore, any factor which causes a great increase in gastric secretion may act similarly.

The rôle of the nervous system in the production of ulcer is more difficult to define. That both gastric secretion and gastric motility are regulated, in part at least, by nervous impulses reaching the stomach through the vagus nerves is well known. Likewise the reflex stimulation of gastric secretion by the sight, smell, and taste of food has been appreciated for many years, and served as the basis of Pavlov's extensive researches on conditioned reflexes. It is conceivable that undue emotional stress may be a factor in the production of ulcer, either by increasing the amount of gastric secretion, or by inhibiting the motility of the stomach. Silbermann's studies, already mentioned, in which ulcer was produced by excessive psychic stimulation of gastric secretion in dogs seem quite pertinent in this connection. It is possible that in the interesting group of cases reported by Cushing in 1932 who developed acute peptic ulcers following operative trauma to the interbrain, injury to the vagus centres may have been the cause of excessive gastric secretion and subsequent ulceration. In spite of the fact that nervous stimuli may be involved in the production of peptic ulcer, Dragstedt feels that, since ulcers can be produced in portions of the gastro-intestinal tract whose central nervous system connections have been entirely severed, the immediate cause of the lesion is a local one.

Urinary Tract. Treatment of Infections by Ketogenic Diet. That the colon bacillus, a common invader of the urinary tract, cannot grow in very acid media has been known for some time.

This fact suggested that acidification of the urine by the administration of drugs might be a valuable procedure in the treatment of urinary tract infections, but W. M. Clark showed as early as 1915 that the concentration of acid in the urine could not be increased sufficiently by this method to completely inhibit the growth of *B. Coli*.

In 1931 A. L. Clark, then of the Mayo Clinic, tried the effects of a ketogenic diet in two cases of bacillary infection of the urinary tract. A ketogenic diet is one in which the supply of carbohydrate is so reduced that it is insufficient to completely oxidize the ingested fat. Fats normally "burn in the fire of the carbohydrates," but when the supply of carbohydrate necessary for their complete oxidation is not available (or cannot be utilized, as is the case in diabetes mellitus), acid ketone bodies (notably acetone, diacetic acid, and beta-hydroxybutyric acid), which are merely intermediate stages in the degradation of fat, are formed and are excreted in the urine. Prior to Clark's work tentative trials of the ketogenic diet had been made by Johnson, and Helmholtz had noted that the urine of a patient with epilepsy treated with a ketogenic diet apparently remained sterile for several days in spite of the fact that it had been voided in an ordinary container. At any rate, Clark was gratified to find that in both his cases the infection was quickly controlled. Since that time, numerous other investigators have confirmed his findings, the mode of action of the diet has been determined, and the limitation of the method pointed out.

The efficacy of the ketogenic diet in eradicating urinary tract sepsis has been found to depend upon the bacteriocidal action of beta-hydroxybutyric acid at a certain degree of acidity (Helmholtz, *Jr. Am. Med. Ass'n.* 105: 778, 1935). For this bacteriocidal action to occur the concentration of beta-hydroxybutyric acid must be as great as 0.5 per cent and the acidity of the urine as high as P_{H} 5.5. Relatively simple laboratory tests will show whether the necessary acidity has been attained, and in occasional cases it may be necessary to give in addition an acid forming substance by mouth (such as ammonium chloride).

In a recent review of his experience with this form of therapy, Helmholtz pointed out that although the colon bacillus is perhaps the most easily killed, the diet has proved effective in infections of the urinary tract caused by various other types of organisms and indeed has a wide applicability. There are certain conditions which may prevent the successful use of the diet. A few patients, especially children, will not tolerate the large amount of fat which the diet contains. Others, while tolerating the diet, do not seem to absorb enough of the ingested fat to produce the necessary degree of ketosis. In those with decreased renal function the damaged kidneys do not seem to be able to excrete a urine with a high acidity and a high concentration of beta-hydroxybutyric acid. And finally, even though a sufficient concentration is obtained, the presence of stones in the urinary tract seem to be an absolute obstacle to successful treatment.

The use of the ketogenic diet is reserved, then, for those cases of chronic urinary tract infection, not associated with the presence of stones, which have failed to respond to simple therapeutic measure. If the infection is associated with an obstructive lesion that can be remedied surgically, the diet may be a helpful adjuvant in the treatment.

Helmholtz divided his patients (all children) into two large groups, those with and without ob-

struction to the urinary tract. In the first group there were 24 cases. Of these, 15 responded quickly and satisfactorily, with complete sterilization of the urine, usually within 24 hours (although the diet was usually continued for a week or more). In 6 cases there was a marked tendency for these infections to relapse, so that several trials of the diet were necessary. In 3 cases the diet failed, because the necessary degree of ketosis could never be obtained.

The second group consisted of 21 patients with infections of the urinary tract associated with obstruction, usually the result of congenital anomalies. In this group the diet was successful in 6 cases, and the urinary tract remained free from infection after the diet was discontinued. In 5 cases, the urinary tract was sterilized temporarily, but after varying periods of time, relapse occurred. In the remaining 10 cases, the treatment was unsuccessful. In 5 the failure was to be explained by the presence of stones; in the other 5, by inability to secure a satisfactory ketosis (because of decreased kidney function, etc.).

It is apparent then, that the ketogenic diet has a definite, though limited place in the armamentarium of those who must treat urinary tract infections. The general use of the diet has been made easier by Clark who has recently prepared a simple form of diet which may be used in the case of ambulatory patients, and whose preparation does not require the services of a trained dietitian (*Jr. Am. Med. Ass'n.* 104: 289, 1935).

See BIOLOGICAL CHEMISTRY; LAW; MEDICAL JURISPRUDENCE.

MEMEL, mā'mel, or **KLAIPEDA**. A territory on the Baltic, including the city of Memel (population, 37,523 on Jan. 1, 1934) and the lower reaches of the Memel or Niemen River, which was detached from Germany by the treaty of Versailles and incorporated in Lithuania in 1924. Under the Memel Convention signed May 8, 1924, between Lithuania on the one hand and Britain, France, Italy, and Japan on the other, the predominantly German population of Memel Territory was guaranteed a large measure of local autonomy. Total area, 1099 square miles; population, 149,273 on Jan. 1, 1934. See GERMANY and LITHUANIA under *HISTORY* for political developments in 1935.

MENDEL, LAFAYETTE BENEDICT. An American biochemist, died in New Haven, Conn., Dec. 9, 1935. Born in Delhi, N. Y., Feb. 5, 1872, he was graduated from Yale University in 1891, and received his degree of Ph.D. in 1893. He held the Larned Fellowship at Yale from 1891 to 1894, and in the following year became a research student at the Universities of Breslau and Freiburg. He began to teach at Yale in 1892, and resumed in 1897 as assistant professor of physiological chemistry at Sheffield Scientific School, which marked the beginning of his distinguished career. He was promoted to full professor in 1903 and in 1921 was appointed Sterling professor of physiological chemistry at Yale. During 1923, Dr. Mendel served as Hitchcock lecturer at the University of California, and in 1930 as Schiff lecturer at Cornell.

From 1903, he was a member of the Board of Governors of Sheffield, of the Graduate School of Yale, and of the School of Medicine at Yale. Also, he was an adviser to the protein and nutrition division of the Bureau of Chemistry of the U.S. Department of Agriculture; a director of the Russell Sage Institute of Pathology, a member of the advisory board of the J. S. Guggenheim Memorial Fund, research associate at the Carnegie Institute

of Washington (1910), and a member of the council on Pharmacy and Chemistry of the American Medical Association. From 1917 to 1919 he served as the representative of the United States Food Administration on the inter-allied scientific food commission, and from 1930 was research associate in biochemistry at the Connecticut experiment station at New Haven.

Dr. Mendel's researches were particularly connected with the physiological chemistry of digestion and nutrition; protein metabolism; physiology of growth; vitamins, and accessory food factors. He was considered one of the foremost men in his field, and particularly outstanding among his contributions to the realm of chemistry were his researches in connection with the discovery of Vitamin A in 1913; the function of Vitamin C, and dietary factors that promote growth.

The recipient of many honors, he was awarded the Gold Medal of the American Institute of Chemists (1927) for his work of outstanding benefit to science, and the Conne Medal of the New York Chemists Club (1934). He was a member of the National Academy of Science; American Chemical Society; American Society of Biological Chemistry, president 1911; associate member of the American Medical Association; a fellow of the American Association of the Advancement of Science, and the first president of the American Institute of Nutrition, 1934.

A writer on scientific subjects, he contributed to many chemical journals, and was associate editor of *Chemical Reviews*, and editor of the *Journal of Biological Chemistry*, the *Journal of Nutrition*, and of *Chemical Monographs* of the American Chemical Societies. His own publications include: *Childhood and Growth* (1907); *Changes in the Food Supply and Their Relation to Nutrition* (1916); *Nutrition—The Chemistry of Life* (1923).

METALLURGY. In the reduction of ores to metals, and in the preparation of those metals for ultimate use, refinements of previously known processes, improvements in standard machinery, and a more general understanding of the fundamental physics and chemistry involved are to be observed rather than radical changes. Progress is most notable in the field of physical metallurgy rather than in processes of ore reduction; a mill or smelter 10 years old, and following the practice of that time, would not be greatly out of date today, but the producer of metals and alloys for industrial use would be greatly handicapped if he were obliged to confine his output to what was available in 1926. Variety and quality have been the aims of the up-to-date metallurgist in his effort to succeed in a competitive world, with the result that man is living in an increasingly metal age.

Ore Dressing. The time is passing when one can sit at a desk, study a description of an ore, and prescribe a suitable treatment process. Use is made of the same old riffles, blankets, jigs, tables, crushers; ball, tube, and rod mills; classifiers, dewaterers, agitators, flotation machines, and filters, but so many combinations have been worked out, and so many types of machinery of the various kinds are available, that the development of a flow sheet in a test plant is almost a necessity for efficient performance. Highest recovery of the wanted mineral or minerals, utilization of by-products if possible, minimum tailing losses, and the best physical character of the product must all be considered along with capital and operating costs. Microscopic examination of feed and products is a modern development that is almost always helpful.

Crushing of run-of-mine ore continues to be done in either jaw or gyratory crushers, with perhaps more improvements noticeable in machines of the latter type than in the former. Advocates of gyratories are arguing for their increased use for fine reduction, down to small fractions of an inch, thereby doing some of the work commonly done by ball mills, and more efficiently. It is now possible, by the use of secondary gyratories and vibrating screens in closed circuit, to afford a ball-mill feed of a maximum size of about $\frac{1}{4}$ inch.

Probably the most radical idea in crushing and grinding machinery in recent years is the Hadsel mill, referred to in previous YEAR BOOKS. Mechanical faults have now been obviated and several new installations have indicated that the machine will have rather wide application. Its acceptance has not so far resulted in much scrapping of old equipment, however. Some further progress, though not on a commercial scale, is reported in the explosive shattering of minerals by steam. In its present form, the process involves formation of a water film on the surface of an ore by condensation from steam at pressures of 250 pounds or higher. Upon release of the pressure, the water turns to steam and, having penetrated into the ore more or less, breaks it up along planes of low fatigue strength. The idea, as worked out in U.S. Bureau of Mines laboratories, is said to indicate a power cost of about one-fifth that of ball mills; lower upkeep; less slime production; differential shattering of the various component minerals which can then be separated more or less by screening; a dry product; and improved amenability to leaching. Commercial trial would seem to be warranted.

Popularity of the Symons cone crusher, especially the short-head type, for secondary or tertiary stage crushing continues. Use of the Newhouse crusher as a secondary crusher for medium-sized plants is also notable.

Grinding mills are now almost universally installed in closed circuit with heavy-duty classifiers. The length of the mills should be short and their diameter large, with extra large feed and discharge trunnions to accommodate circulating sand loads at least 10 times the new feed. Spiral feed scoops must be extra heavy, tipped with abrasion-resisting metal, and with renewable liners. Wattmeters will serve as a guide to correct loading. A constant-head tank for dilution water should be provided, and the dilution of the overflow should be checked frequently. A gravity flow to and from the mill and classifier should be provided, but where that is impossible, the sand at least should return to the mill by gravity. Further improvements have been made in Dorr classifier equipment, and it remains the most generally used of any, though the Hardinge countercurrent classifier is affording more competition. The Akins submerged type is also not uncommon. Of the Dorr machines, the Quad F type of bowl classifier, with its large raking capacity, introduced three or four years ago, has been generally accepted as a secondary classifier in closed circuit with tube mills.

Where the ore pulp is somewhat coarser, or is unmixed with water, many types of vibrating screens are available. Some of the latest are the Symons flat balanced screen; the TelSmith, with circular vibratory motion; and the Robins circular-throw balanced screen. Screens as fine as 400 mesh have been made available by making use of the process of electrodeposition.

In the new types of thickeners, the old-style bridge type of superstructure has been eliminated,

with a consequent reduction of the headroom required. Rake arms are now made that automatically adjust themselves to variations in the raking load. Use of shallow thickeners, with underdriven rakes, as classifiers for extremely finely divided pulps, has been proved successful in several mills.

Flotation is being applied in more and more gold mills, and extensive test work has been done in the large mills of the Rand, where that type of concentration has not heretofore been employed on a commercial scale. In many American plants, unit flotation cells are used to concentrate gold between the ball mill and classifier, though in some plants jigs or hydraulic cone traps are preferred for the same purpose. Corduroy blanket tables are also finding extended use for the recovery of free gold before cyanidation or flotation.

Flotation reagents are available in ever-increasing variety. Xanthate, one of the most popular, is now available in six forms—Z3 (potassium), Z4 (sodium), Z5 (amyl), Z6 (pentasol), the last two made from amyl alcohols; Z7 (primary butyl), and Z8 (secondary butyl). There is a Dixanthogen 4, 6, and 8. New Aerofloat reagents include Sodium Aerofloat "B," somewhat like the old Sodium Aerofloat but a better promoter for zinc; Nos. 203 and 243, improvements on the old No. 208, and acting as promoters for zinc and copper sulphides and free gold; and No. 244, which is somewhat cheaper than ethyl xanthate and is being used at the New Cornelia copper concentrator in Arizona. A series of complex higher alcohols, known as the du Pont frothers, are also now on the market.

Modern types of flotation machines include mechanical agitation to a great extent, the purely pneumatic type not being so popular as a few years ago. Among the new machines may be mentioned the Fagergren, the Booth-Thompson Agitair, the Geco, and the Mayer and Hale countercurrent machine. The new Geco machine has a flat rubber disk for a stirrer, with low-pressure air injected through a perforated rubber diaphragm beneath the disk.

With current high prices of gold and silver, many old tailing dumps are being re-treated. Also, because of improved metallurgical technique, re-treatment of base-metal tailings is often economically practical. Flotation is commonly employed in such work, the most important problem in this connection being proper conditioning of the pulp. Too often the time factor is neglected. Agitation tanks of the Pachuca type, using air for agitation, are employed, with the addition of the necessary chemicals for maximum efficiency in the subsequent flotation process.

In filtering equipment, the most outstanding recent development is the string filter, which is of the drum type, a multiplicity of strings removing the filter cake instead of a scraper accompanied by an air blow. The familiar Oliver type is now available in a form that carries the cake around to be blown off below the centre line, where gravity assists. A rubber-glass filter medium has been developed, of much greater homogeneity than the conventional canvas. Small pan filters are available where only small tonnages of concentrates are to be dewatered.

Pyrometallurgy. Research at the plant of the United Verde Copper Co., in Arizona, has developed an interesting process for the treatment of copper-zinc ores in which the two metals cannot be separated by mechanical concentrating methods. A basic-lined converter is the only furnace used, the ore being gradually fed as the molten material ac-

accumulates. Zinc is expelled as fume, copper accumulates as cuprous oxide, and iron as molten magnetite in the first part of the process, which is of an oxidizing nature. Reducing gas is then blown into the vessel, producer gas being appropriate, whereupon the rest of the zinc is volatilized as zinc oxide, the magnetite is reduced to ferrous oxide, and metallic copper, about 98 per cent pure, is formed. The necessary blast for the process is preheated by the exit gases, which are also hot enough to generate all the power needed, through the use of a waste-heat boiler. The gas can then be used for sulphuric acid manufacture. The zinc fume is adaptable as a raw material for electrolytic zinc, and the ferrous oxide for making high-grade iron. Though the process is not yet commercial, it is worthy of study by smeltermen generally.

In the more conventional zinc plants, installations of the comparatively new vertical retorts are continuing both in the United States and Germany. These, with fractional distillation columns (U.S. Patents Nos. 1,994,345-1,994,358, issued in 1935) are capable of making zinc of a purity of 99.99 plus, and are thus competitive with electrolytic plants. The original cost is less and they are perhaps more adapted to certain low-grade ores. Operating conditions, however, favor the electrolytic process, especially where extreme purity is demanded. An extremely pure metal is required for making zinc die castings, the field for which is expanding rapidly.

Galvanizing plants are making a much higher-grade product than a few years ago, the zinc coating being sufficiently thick to last for many years under normal conditions. Last year saw the completion of the first wire electroplating plant, using the Tainton process. Thorough cleaning of the wire in a fused alkali bath, the wire serving as a cathode in an electrolytic circuit the while, is an important feature of the process.

Practically nothing has been published in the last year on copper and lead smelting practice, the smelters having a bad case of nerves because of several patent infringement suits that have been brought against them, or threatened. No radical changes have been made. Probably the most interesting recent work has been in lead refining and in the field of flash roasting, whereby fine particles of sulphide ore are momentarily oxidized as the ore stream falls through a heated chamber. J. O. Betterton, at the American Smelting & Refining Co. plant at Perth Amboy, N. J., has made marked improvements in the elimination of impurities from lead bullion. The technique of recovering metals from scrap, especially old battery plates, has likewise improved greatly, but the smelters are keeping their methods to themselves.

In iron blast-furnace work, higher hot-blast temperatures may be mentioned, as high as 1800° F. being reported. High temperatures in open-hearth steel furnaces are also being recognized for best efficiency, which necessitates better refractories. Some furnace roofs have been equipped with thermocouples to give more complete information to the operators. More and more furnaces are being insulated up to the floor level. Roof insulation has been successful at some plants, less so at others. More rapid charging has been studied, this involving proper preparation of scrap, larger charging pans and doors, and dolomite machines. Natural gas has been increasingly used as fuel, now that it is available at so many centres of steel production. A little fuel oil may be added to improve luminosi-

ty and heat transfer. Copper stools are still in the experimental stage.

Bessemer steelmaking has held up well recently, and more attention is being given to it. The only new steel plant in England, at Corby, produces basic Bessemer steel exclusively.

High-quality cast irons are a metallurgical achievement of the recent past. Small proportions of nickel, chromium, or molybdenum have been found to add greatly to the desirable characteristics of the product, as does proper heat-treatment. Tensile strengths as high as 70,000 pounds per square inch have been secured. Cast iron is no longer merely cast iron; it is available in a large variety of forms.

Advances continue to be made as well in the field of alloy steels, products now being available to withstand almost every conceivable severity of service—shock, vibration, abrasion, corrosion, and high temperature. Among the metals most commonly used for alloying purposes are nickel, chromium, manganese (in excess of 1 per cent), molybdenum, tungsten, vanadium, copper, and silicon (above 0.5 per cent).

METEOROLOGY. An outstanding event in the field of meteorology during 1935 was the stratosphere flight of the balloon *Explorer II* on November 11. The official altitude figure of 72,395 feet was determined by the National Bureau of Standards in Washington from instrumental records of the flight, and marks the greatest height that man has attained above the ground. At the close of the year the scientific records of this flight had not yet been completely analyzed.

A. E. M. Geddes has carried out an investigation on the trend of temperature at Aberdeen, Scotland from 1870 to 1932. He finds that the mean annual temperature has slowly increased through this period. This conclusion agrees with that reached by J. B. Kincer two years ago when he made a similar investigation on a number of stations over the world. Geddes divided the year into four seasons and investigated the seasons separately. In this way he found that the trend in the mean annual temperature was due almost entirely to the trend of the winter season alone. This result has caused the opinion that the observed trend is due to city and village influences: thus their slow but steady growth and the more speedy removal of snow from them, and the more thorough manner in which buildings where people live and work are heated as compared with former years may cause the observed winter temperatures to be slightly but progressively higher than formerly.

By a new and sensitive analytical procedure, Paneth and Gluckauf have found that the proportion of helium begins to increase above 21 km.

Necrology. Georg Stüve, February 21; Axel Wallén, February 24; A. W. Greely, October 20.

Bibliography. C. F. Brooks, *Why the Weather* (Rev. and enl. ed., New York); Jerome Namias, *An Introduction to Air Mass Analysis* (Am. Met. Soc. Milton, Mass.); *Some Problems of Modern Meteorology* (Royal Met. Soc. London); W. E. Knowles Middleton, *Visibility in Meteorology* (Toronto); R. A. Watson Watt, *Through the Weather House* (London).

METHODIST CONNECTION (OR CHURCH) OF AMERICA, WESLEYAN. A branch of the Methodist Episcopal Church, organized in 1843 as an anti-slavery and non-episcopal denomination. In 1935 it comprised 29 annual conferences. There were 745 churches, 854 ministers, 663 local preachers, and 25,193 members. The Sunday schools num-

bered 771, with 9426 teachers and officers, 48,553 pupils, and 7986 persons enrolled in the home department, and on the cradle roll.

The church maintained the following educational institutions: Houghton College in Houghton, N. Y., Central College in Central, S. C., Marion College in Marion, Ind., and Miltonvale College in Miltonvale, Kans. The foreign missionary department of the Missionary Society continued its work in Africa, India, and Japan, and the department of home missions and church extension among the American Indians, Mexicans, and mountaineers of the South. The *Wesleyan Methodist*, weekly, is the official organ of the church. The officers are: President, the Rev. E. D. Carpenter; first vice-president, Rev. F. R. Eddy; second vice-president, Joe Lawrence; and secretary, the Rev. E. F. McCarty. Headquarters are at 330 East Onondaga Street, Syracuse, N. Y.

METHODIST EPISCOPAL CHURCH.

The year 1935 marked some interesting anniversaries, some striking trends, some unique gatherings, and some forward looking movements that promised much in the future work of the Methodist Episcopal Church. In the sixth year of the depression, during which the Church had kept her doors open and her preachers employed, there were evidences of better days ahead.

Anniversaries. The Methodist Episcopal Church joined with other churches and the American Bible Society in celebrating the 400th anniversary of the printing of the Coverdale Bible, the first edition printed in English, the book which continues to be the best seller of the years.

On October 20, the Methodists and Moravians joined in Bethlehem, in celebrating the 200th Anniversary of the sailing from England of John and Charles Wesley and 26 Moravians who were to have a very strong influence on the two brothers—the Wesleys to work under Governor Oglethorpe in Georgia and the Moravians to strengthen the Moravian settlement at Bethlehem, Pa. On March 5, St. Paul's Church, New York City, celebrated the centennial of the dedication of their first building and on August 13, the Eighteenth Street Church the Centennial of the laying of their corner stone.

Steps Toward Unity. On December 30, the Rev. Jarrell Waskom Pickett was elected a bishop of the Central Conference in Southern Asia. On September 17, the Missouri Conference met in its annual session at Springfield, Mo., Bishop Charles L. Mead, presiding. At the same time and in the same city the Southwest Missouri Conference of the Methodist Episcopal Church, South, met under the presidency of Bishop John M. Moore. The two Conferences joined in their morning devotional services; their anniversary services in the interest of temperance, education, etc., their inspirational addresses; and the Sunday morning "Aldersgate" Service, commemorating the day in 1738 when John Wesley "felt his heart strangely warmed." But there were two services that stood out distinctly as the promise of better days to come. On Wednesday evening the two Conferences met together for the Communion service. Here the ministers and members of the two Churches knelt together and received the Communion emblems from the hands of Bishops Charles L. Mead and John M. Moore and Pres. John C. Broomfield of the Methodist Protestant Church. Again on Sunday afternoon the two Conferences met for a union ordination service. For the first time in nearly 100 years of divided Methodist history, 10 men

were ordained deacons and 4 men were ordained elders by the representatives of three great branches of Methodism in America. At the close of the evening service, addressed by Secretary Diefendorfer of the Methodist Episcopal Church, and the Rev. Ivan Lee Holt of the Church South and President of the Federal Council of the Churches of Christ in America, the Bishops read the list of appointments, each for his own Conference. From this union gathering, the preachers went out to their tasks more closely united than ever before and catching step as pioneers in the much hoped for union of the Churches.

In May, 1936, in Columbus, Ohio, is scheduled to be held the Quadrennial Session of the General Conference. This is the law-making body of the Church. In 1932 there were 848 Ministerial and Lay Delegates from 131 Conferences, of whom about 60 were women. In addition to its regular work, the General Conference of 1936 is to devote a great deal of time and thought to the report of the Committee on the Unification of the Methodist Episcopal, the Methodist Episcopal, South, and the Methodist Protestant Churches. Late in 1935 a Joint Commission of the three Churches submitted a plan of union to the Churches for their approval. The proposal is that, when the union of the Churches is complete, the new Church shall be called the Methodist Church. In the United States, the Methodist Protestants have 191,595 members, the Methodist Episcopal, South, 2,725,954, and the Methodist Episcopal, 4,296,288, or a total of 7,213,837. Including the Foreign Conference, the membership is over 8,000,000, with a Sunday School enrollment of nearly 6,500,000. The Primitive Methodists, with a membership of 12,000, have already expressed a desire to become a part of the new Church. When the union is effected it will make for a closer bond between the Home Church and the Methodist Churches that have been organized in Brazil, Japan, Korea, and Mexico.

Before the union is effected, a certain procedure must be followed. The question will be submitted to the General Conferences of the Methodist Protestant and Methodist Episcopal Churches in 1936. If the General Conference adopts the proposal, by a two-thirds vote, it will then be submitted to the Annual and Lay Conferences for their approval in 1937. In these Conferences, two-thirds of the members present and voting must concur in the action of the General Conference before it is finally adopted by the Church. In 1938, the proposal will be presented to the General Conference of the Methodist Episcopal Church, South, where the same procedure will be followed and where the same vote is necessary in the General Conference and the Annual and Lay Conferences. This will make possible a deciding vote by the end of 1939.

The Methodist Hymnal. On May 4, 1928, at Kansas City, Mo., a resolution was presented to the General Conference by Chester A. Smith of the New York Conference authorizing the appointment of a committee to revise the Methodist Hymnal which had been in use since 1905. The Church, South, accepted an invitation to cooperate in the revision and in 1931 the Methodist Protestant Church asked to be allowed to join the group. Dr. Robert G. McCutcheon of DePauw University, Greencastle, Ind. was elected editor-in-chief. The revision was completed early in 1935 and the first delivery of the Methodist Hymnal, the official hymnal of the Methodist Episcopal, the Methodist Episcopal, South, and the Methodist Protestant Churches, was made on October 1.

Bishops Meetings on Evangelism. Recognizing the need of more aggressive work in the saving of men for the kingdom of God, the Board of Bishops, through its Committee on Evangelism, planned a series of meetings across the continent to awaken a new interest in this, the real work of the Church. These meetings were to be the first in a series of meetings leading up to the 200th anniversary of John Wesley's "Aldersgate Experience." From November 25 to December 13, representatives of the Board of Bishops and others held meetings for addresses, round table discussions, and a study of the programme, message, and function of evangelism in New York, Philadelphia, Washington, Pittsburgh, Columbus, Indianapolis, St. Paul, Des Moines, Kansas City, and Denver. Of the opening meeting in New York it was said that this was the largest and most enthusiastic gathering of Methodist preachers and laymen that had ever assembled in the metropolitan area.

Necrology. Among those who answered the final roll-call of the Conferences in 1935 were Charles M. Boswell, Superintendent of the Philadelphia Methodist Hospital; James (Jim) Hoover, missionary, of Borneo; Lemuel H. Murlin, educator; Edward S. Ninde, pastor; I. B. Schreckengast, educator; David G. Downey, secretary of the Board of Sunday Schools and book editor of the Church; Frank Mason North, poet, administrator, and Christian statesman; and Jacob E. Price, one of the founders of the Epworth League and for 60 years an active pastor in the Church.

METHODIST EPISCOPAL CHURCH, SOUTH. A separate branch of the Methodist Episcopal Church, formed in 1845 over the question of slavery. In 1935 there were 47 conferences and missions, of which 41 were in the United States and 6 in foreign countries; 16,408 churches; 7933 traveling preachers and 4096 local preachers; and 2,771,240 church members. Sunday schools numbered 15,528, with an enrollment of 1,927,581 pupils. Contributions for all purposes in 1935 amounted to \$24,169,071. The denomination sponsored 87 educational institutions, including 47 universities and colleges, 7 academies, and 31 mission schools. Important periodicals are the *World Outlook* and the *Christian Advocate*.

The Commission on Internominal Relations and Church Union, having been by the last general conference authorized and empowered and directed to represent the Methodist Episcopal Church, South, in all questions of paternity with other denominations in the United States, held during the year several meetings with similar commissions from the Methodist Episcopal Church and the Methodist Protestant Church, and finally agreed on a plan of union which they propose to transmit to the respective general conferences of the three churches for adoption by the processes which they respectively require.

During the year, the church sponsored a great Young People's Conference which was held at Memphis, Tenn., in December, bringing together more than 6000 delegates besides several thousand visitors. Headquarters of the church are in Nashville, Tenn.

METROPOLITAN OPERA ASSOCIATION. See Music.

MEXICO. A federal republic of North America, comprising 28 States, two Territories, and the Federal District (Mexico City and 11 surrounding villages). Capital, Mexico.

Area and Population. With an area of about 767,198 square miles, Mexico had an estimated

population on Jan. 1, 1934, of 17,600,000 (16,552,722 at the 1930 census). The 1930 population included 4,620,880 Indians, 2,444,466 whites, and 9,040,590 of mixed race. Populations of the chief cities at the 1930 census were: Mexico, 960,905 (1,029,068 including villages added to the Federal District in 1931); Guadalajara, 184,826; Monterey, 137,388; Puebla, 122,914; Mérida, 110,183; San Luis Potosí, 91,883; León, 99,457; Toluca, 89,895; Aguascalientes, 82,184; Veracruz, 71,883; Tampico, 70,183.

Education. The 1930 census showed an illiteracy rate of 56 per cent; 51.18 per cent of the children of school age were attending school in 1932. Education is mainly under State auspices, the Federal Government maintaining the schools only in the Federal District and the Territories. In 1932 there were 5733 urban primary schools, with 959,286 pupils; and 13,719 rural primary schools, with 917,503 pupils. Besides 108 secondary schools, there were 415 vocational, normal, and professional schools. The eight universities include two in the Federal District and one each in Michoacán, Jalisco, Nuevo León, San Luis Potosí, Veracruz, and Yucatán. See *History* for developments in 1935.

Production. Agriculture is the main support of the population. In 1934 35,815,000 acres were under cultivation or in agricultural use, 64,222,000 acres were forest lands, and 9,880,000 acres of arable land remained uncultivated. Production of the chief crops in 1934 was: Wheat, 10,104,000 bu.; corn, 66,978,000 bu.; barley (1933), 3,156,000 bu.; rough rice (1934-35), 3,269,000 bu.; beans, 5,878,000 bu.; tobacco, 24,608,000 lb.; cacao, 2,343,000 lb.; coffee, 87,443,000 lb.; cotton, 209,000 bales (of 478 lb.) in 1934-35; sugar, 520,000,000 lb. in 1934-35; henequen, 72,000 lb.; chickpeas, 2,255,000 bu. Bananas and tomatoes are other important crops. Wool production in 1934 was estimated at 2500 metric tons. Mineral output in 1934 was (in metric tons): Coal, 630,000 (565,000 in 1933); petroleum, 5,711,000 (5,087,000); iron ore, 68,000 (78,000); pig iron and ferro-alloys, 27,000 (1933); steel, 76,000 (1933); copper, 44,300; lead, 166,300; zinc, 125,200. Output of other metals in 1934 (in kilograms) was: Gold, 20,572 (19,836 in 1933); silver, 2,306,168 (2,118,229); antimony, 2,667,726 (1,949,810); white arsenic, 7,859,722 (4,697,083); amorphous graphite, 3,898,007 (2,685,439); cadmium, 384,714 (1,291,867). Mexico's silver production is normally about 40 per cent of the total world output. The industrial census of 1935 showed 249,757 manual laborers employed in 8156 establishments, excluding all household industries lacking machinery and all establishments with an annual output of less than 7500 pesos. Annual wages paid laborers totaled 122,069,601 pesos.

Production of petroleum in 1935 was 40,234,902 bbl. (38,171,946 in 1934); silver, 2,345,460 kilograms (2,306,300 in 1934).

Foreign Trade. Mexico's imports in 1934 increased by 89,467,000 pesos, or 36.59 per cent, over 1933, while exports increased by 278,774,000 pesos, or 76.38 per cent. The total value of imports was 333,942,000 pesos (244,475,000 in 1933) and that of exports was 643,741,000 pesos (364,967,000 in 1933). Of the 1934 imports, the United States supplied 202,697,000 pesos (146,545,000 in 1933); United Kingdom, 35,956,000 pesos (21,753,000); Germany, 34,491,000 pesos (29,264,000); France, 16,612,000 pesos (16,481,000). Exports went principally to the United States, 333,604,000 pesos (174,871,000 in 1933); United Kingdom, 132,352,000 pesos (79,484,000); Germany, 40,972,000 pesos (27,365,000);

Belgium, 19,766,000 pesos (16,008,000). The value of the principal 1934 imports (in 1000 pesos) was: Passenger automobiles, 14,903; iron and steel pipes and joints, 11,764; rayon yarn, 12,360; gold and silver coins, 6229; lard, 5623; cotton thread, 4225. Exports by leading items were (in 1000 pesos): Petroleum and products, 156,888; gold, 109,004; silver, 98,058; lead, 56,506; zinc, 41,546; coffee, 27,457; henequen, 14,167; tomatoes, 10,087.

Preliminary 1935 trade returns placed imports and exports at 406,598,240 pesos and 750,291,771 pesos, respectively. United States statistics for 1935 showed imports from Mexico of \$42,325,621 (\$36,495,473 in 1934) and exports to Mexico of \$65,576,275 (\$55,061,282).

Finance. Budget estimates for 1935 placed Federal revenues at 275,800,000 pesos and expenditures at 275,795,000 pesos. The chief expenditure items (in pesos) were: War department, 62,000,000; education, 45,000,000; public debt service, 32,000,000; communications, 32,000,000; agricultural credit, 20,000,000. Final budget returns for 1934 showed receipts of 295,277,000 pesos and expenditures of 263,705,000 pesos, excluding 1,035,000 pesos pending payment. In addition there were extrabudgetary expenses in 1934 of at least 21,803,000 pesos.

By the decree of July 26, 1931, the monetary unit was changed from the gold to the silver peso. The average exchange value of the latter was \$0.2810 for 1933 and \$0.2774 for 1934. The moratorium on foreign debt payments declared in December, 1931, was continued during 1935. The public debt on Dec. 31, 1934, totaled 1,400,436,000 pesos (internal, 128,136,000; external, 1,272,300,000).

Communications. Mexico in 1934 had about 14,317 miles of railway lines, of which 7015 miles were operated by the National Railways and 3925 by the State governments. Highways extended 62,140 miles, of which only about 400 miles were surfaced. The 764-mile highway between Mexico City and Laredo, Tex., was completed in 1935, 10 years after the work was initiated. Air transportation in 1934 was provided by 15 companies, with routes aggregating 9618 miles, or 2602 miles more than in the previous year. In 1933 a total of 11,971 vessels of 1,277,429 tons entered Mexican ports.

Government. The Constitution of 1917, as amended in 1929 and 1933, vests executive power in a President elected by direct popular vote for six years and ineligible for reelection. Legislative power rests with an elective Congress of two houses—a Chamber of Deputies of 170 members chosen for three years and a Senate of 58 members, renewed every six years. The National Revolutionary Party, organized by President Plutarco Elías Calles in 1928, controls the Government and Congress, there being no effective Opposition. President in 1935, Gen. Lázaro Cárdenas, who assumed office Nov. 30, 1934.

HISTORY

Calles Overthrown. The Mexican revolution received a new and powerful impetus in 1935 when President Cárdenas successfully challenged the power of Gen. Plutarco Elías Calles, who had exercised practically dictatorial control even after his retirement from the presidency in 1928. As leader of the National Revolutionary Party, Calles had made and broken successive Presidents and was responsible for the election of Cárdenas. The latter, however, showed signs of independence soon after his inauguration on Nov. 30, 1934, and the divergence of policy between the two leaders soon led to an open break.

The issue on which the showdown came was that

of the government's attitude towards labor. Known 10 years earlier as the forceful and highly effective leader of the revolutionary masses, Calles by a gradual transition had emerged as the champion of economic conservatism—the main support and spokesman of Mexican and foreign business and commercial interests. Closely allied with Calles was a group of wealthy politicians, landowners, and industrialists, whose interests were in direct conflict with the radical programme they professed as members of the National Revolutionary Party. They were strongly inclined to disregard the radical provisions of the Constitution giving labor decisive advantages in its relations with capital. Labor, by its high-handed and arbitrary abuse of its privileges, provided the Calles group with an excellent excuse for their attitude.

Cárdenas, however, stood on the letter of the Constitution and gave labor unqualified support. During the spring of 1935 the assurance of presidential backing produced a series of strikes among taxi and bus drivers, telephone workers, street railway employees, and workers in many other lines. These strikes greatly hampered all lines of business activity and harassed business men and industrialists, since the labor code provided for the closing of all shops in which strikes occurred pending a decision on the strike issue by a labor tribunal. On June 12 Calles brought to a head the conflict between radicals and conservatives which had been rapidly developing in the Cabinet and in Congress. In an interview with a group of Senators he criticized the "marathon of strikes" which was sweeping the country and denounced labor leaders for disturbing "the march of economic construction." While expressing friendship for President Cárdenas, he deplored the attempt to draw a line of division between his own and the latter's supporters in Congress on this issue, and tacitly warned Cárdenas that a similar development had led to the resignation of President Ortiz Rubio in 1932.

This statement was warmly acclaimed by the Mexican Employers' Association, the National Chamber of Commerce, and foreign corporations. But the labor organizations, supported by the students, announced that they would defend their constitutional rights by general strikes, if necessary, against "the possible implantation of a Fascist régime." Most of the politicians and some generals immediately climbed on the Calles bandwagon, believing that the fate of Cárdenas was sealed. But the President met the challenge boldly and decisively. He forced the resignation of his entire Cabinet, on which Calles adherents predominated, and dismissed a number of departmental chiefs and generals who were actively associated with Calles.

These moves, combined with the army's apparent support of Cárdenas, reversed the situation overnight. The majority groups of Congress announced their support of the President and the National Revolutionary Party named as its chief former President Emilio Portes Gil, a middle-of-the-road leader who espoused Cárdenas's cause. On June 17 Cárdenas appointed a new Cabinet of sober and hard-working men, said to be sympathetic to his radical ideas. On the same day General Calles left the capital for the northwestern State of Sinaloa, announcing that he left "full responsibility for public affairs with those who have them in their hands." Shortly afterwards he left Mexico for the United States, making it clear that he accepted his defeat. Calles undoubtedly had sufficient backing to have plunged Mexico into civil war had he wished to do so. His voluntary abdication was taken by

some of his admirers as an illustration of his sincere patriotism.

With Calles at least temporarily defeated, Cárdenas took active and sagacious steps to consolidate his position. During June and July he traveled throughout the country and by innumerable conferences with the leaders of labor and agrarian organizations enlisted their enthusiastic support. Amnesty for persons exiled for their religious or political views was proclaimed early in July. The censorship was lifted to a large extent, the great gambling resorts throughout Mexico were closed, a campaign inaugurated for control of the liquor traffic, and a more lenient attitude was displayed towards the Roman Catholic Church.

With the Federal powers firmly in his grasp, Cárdenas turned to deal with the State governments, many of which were notoriously corrupt and strongholds of Callistas. His first clash was with Tomas Garrido Canabal, the radical dictator of the State of Tabasco. The latter was anathema to Catholics, laborers, and liberals alike for his 15-year Fascist rule under which the church and the saloon were banished, political opponents ruthlessly crushed, and the labor and agrarian clauses of the Constitution openly disregarded. A close follower of Calles, Garrido had been included in the first Cárdenas cabinet and the subsequent activities of his Fascist Red Shirts had aroused widespread indignation and unrest (see 1934 NEW INTERNATIONAL YEAR BOOK, p. 423).

On July 20 a group of University of Mexico students, arriving in Villahermosa, the capital of Tabasco, to organize political opposition to Garrido, were met by Red Shirt machine-gun fire. Three were killed and others wounded. The news provoked nation-wide protest demonstrations, especially in strongly Catholic centres, and Cárdenas seized the opportunity to strike. He summarily supplanted the Governor and military commander of Tabasco with his own appointees, ordered the dissolution of the Red Shirts, and forced Garrido to take refuge in Costa Rica. This coup greatly enhanced the President's prestige and he used it during succeeding months to oust several other State Governors who were either strong Calles supporters, notoriously corrupt, or antagonistic to the interests of agrarians and industrial workers. Furthermore, in an apparent attempt to offset the predominant power of the army, he took steps to arm and organize the agrarian workers. The redistribution of the large estates was also resumed with additional vigor.

Cárdenas showed his radicalism, tempered with moderation, in other directions. His appointment of Señorita Palma Guillén as Minister to Colombia made Mexico the first Latin American country to honor a woman with a diplomatic post. After lack of funds and strife between right and left wing students had caused the University of Mexico to close indefinitely on September 11, the President withdrew most of the institution's autonomous powers, made it again dependent upon State aid, and ruled that socialistic education was required. The ruling was interpreted in a liberal manner and the university was reopened September 26. Later the same month the President sent a special message to Congress proposing a complete change in the system of higher education inherited from Spanish colonial days. Declaring that the existing system reflected all the vices and anachronisms of the social order, he urged that higher instruction be made available to the working class and the peons by means of free

tuition and the provision by the state to students of free lodgings, food, and clothing.

The tension engendered in Mexico by the Cárdenas-Calles clash was reflected in a fatal shooting affray in the Chamber of Deputies on September 11, in which two Deputies were killed and two wounded. The Cárdenas adherents, constituting a majority of the Chamber, charged that the shooting was planned by the Calles supporters to discredit the President. The following day the majority bloc voted to expel 17 minority Deputies. A rule against the carrying of guns in Congress also was adopted.

During October and November President Cárdenas was intermittently ill with fever contracted during his travels through tropical Mexico. Rumors that he would be forced to resign proved unfounded and in December he was reported as fully recovered. On November 30 he completed the reorganization of his cabinet by the appointment of Edward Hay, a former cabinet minister, as Minister of Foreign Affairs. About the same time the government authorized horse racing and dice and domino playing to be resumed at Tijuana and other border resorts which had been practically ruined by the President's order against gambling. On October 24 the President, clarifying his position regarding foreign capital in Mexico, invited alien investors to enter the Mexican investment field. He promised fair treatment and full protection as long as Mexican laws were strictly adhered to.

Church-State Struggle. The victory of Cárdenas over Calles was followed temporarily by a distinct moderation of the old struggle between the Roman Catholic Church and the state, which reached an acute stage during 1934 and the first months of 1935. On Feb. 12, 1935, the government had continued its attack upon the church by barring all religious literature from the mails. Early in March the Archbishop of the State of Durango protested "the innumerable outrages committed in that State which have not only violated the rights of the church but also the most elemental rights of citizens." On March 6 Archbishop Pascual Diaz, Primate of Mexico, was held under arrest for 21 hours and fined 100 pesos for confirming a group of children in alleged violation of the law. About the same time a clash between Red Shirts and Catholic students of the University of Guadalajara resulted in three deaths and injuries to seven others.

Tension between the government and the Catholics, particularly over the issue of socialistic education, was becoming more acute when the Cárdenas-Calles breach occurred. The elimination of Garrido and several other strongly anti-Catholic members of the cabinet and the appointment of Gen. Saturnino Cedillo, former Governor of the State of San Luis Potosí, as Minister of Agriculture served to lessen Catholic apprehension. Under Cedillo's rule San Luis Potosí had escaped the extremes of the religious struggle, and it was evident that he would exercise a liberal influence in the cabinet. Moreover, the President, while affirming his intention of enforcing the church laws, gave Catholic organizations a hearing which had previously been denied. In some of the strongly Catholic cities and States observers reported that the legal restrictions upon the church were no longer being enforced.

On September 4, however, the President approved a law nationalizing all churches and buildings used for public worship, including religious schools and the residences of bishops and priests. In October, 14 archbishops and bishops petitioned President Cárdenas on behalf of the entire Roman

Catholic hierarchy in Mexico, asking abrogation of the nationalization law and also amendment of four articles of the Constitution, namely, those imposing socialistic education, restricting religious freedom, confiscating church property, and restricting the number of clergy.

General Cárdenas rejected the petition in a sharply worded letter made public November 5. This exchange, while tending to restore the church-state dispute to a controversial plane, was accompanied by a renewal of violent conflict between government adherents and the opponents of socialistic education. Large and well-armed bands of rebels took the field in Jalisco, Sonora, and a number of other States and carried on guerrilla warfare against government officials and school teachers. Most of them were reported to have been broken up by Federal troops, after a number of serious encounters. A considerable number of priests and lay leaders of the Catholic defense movement were arrested by the government.

U.S.-Mexican Relations. The church-state conflict in Mexico led to repeated demands by Roman Catholic organizations in the United States for intervention by the United States Government. In January Sen. Robert F. Wagner of New York introduced a resolution in the U.S. Senate calling for the severance of trade relations with Mexico. In the House of Representatives there were demands for the breaking-off of diplomatic relations and the recall of Ambassador Josephus Daniels. Senator Borah of Idaho, referring to the "vindictive anti-religious policy of the present Mexican Government," called for an inquiry into "religious persecution and anti-religious compulsion and agitation in Mexico for the purpose of determining the policy of the United States in reference to this vital problem."

The Borah resolution was tabled by the Senate Committee on Foreign Affairs and the State Department took no action. In response to a demand from Martin H. Carmody, Supreme Knight of the Knights of Columbus, that the government halt "persecution of religion by the Mexican Government," President Roosevelt on November 17 emphatically declined. He said he would not permit the United States to "undertake a policy of interference in the domestic concerns of foreign governments and thereby jeopardize the maintenance of peaceful conditions."

The Gold Shirts. The appearance in Mexico of a Fascist organization, labeled the Gold Shirts, was the signal for counter-preparations by Communists and radicals. The rising hostility between Right and Left wing elements broke out in a serious clash between Gold Shirts and radicals in Mexico, D. F., on November 20, in which 5 persons were killed and 34 wounded. Two days later the Mexican Senate adopted a resolution asking President Cárdenas to dissolve the Gold Shirt organization.

The Silver Problem. The action of President Roosevelt in raising the price of newly mined domestic silver from 64.64 cents to 77.57 cents per ounce during April, 1935, had serious repercussions upon the Mexican monetary system. As the largest producer of silver, Mexico derived substantial benefits from the resulting rise in the price of the white metal. On the other hand the value of the silver in the peso appreciated so rapidly that it became profitable to melt down coins and sell them as bullion. The Mexican Government forestalled this tendency by a decree of April 26 requiring that all silver money be turned over to the Treasury and exchanged for notes. The peso then returned to its

previous level. A new 50-centavo coin, known as the *toston* (plural, *tostones*), containing a smaller relative amount of silver, was also issued.

Prosperity Returns. The increased price of silver was an important element in the economic revival which continued during 1935. Other factors were the heavy influx of tourists, chiefly from the United States, and the liberalization of credit by the Bank of Mexico and the National Bank of Agricultural Credit. By September, 1935, the government was running a substantial surplus and receipts for the entire year were expected to exceed expenditures by nearly 50,000,000 pesos. This development lent special interest to President Cárdenas's announcement of August 16 that payments on the foreign debt would be resumed as soon as possible. Meanwhile the government used part of its surplus to finance a number of infant industries and to establish semi-governmental enterprises designed to reduce retail prices of certain commodities, such as paper. The cooperative movement, which first received legal recognition through legislation effective in May, 1933, made rapid strides during 1935, 324 cooperative societies being formed in the first half of the year. The movement received vigorous support from the President and the government.

Consult Earle K. James, "Church and State in Mexico," *Foreign Policy Reports*, July 3, 1935; V. F. Calverton, "Red Rule in Mexico's Schools," *Current History*, December, 1935; Charles S. Macfarland, *Chaos in Mexico* (New York, 1935); *Renascent Mexico*, edited by Hubert Herring and Herbert Weinstock (New York, 1935).

MIAMI UNIVERSITY. A coeducational State-supported institution at Oxford, Ohio, founded in 1809. The enrollment for the autumn of 1935 was 2611. The enrollment in the summer sessions 1st term, 606; 2d, 259. The faculty numbered 199. The income from the State of Ohio, fees, gifts, and income on investments for 1934-35 was \$1,282,488. There were 131,500 bound volumes in the library. President, Alfred H. Upham, Ph.D.

MICHIGAN. Population. On Apr. 1, 1930 (Fifteenth Census), 4,842,325; July 1, 1934 (latest Federal estimate), 5,093,000; 1920 (Census), 3,668,412. Detroit had (1930) 1,568,662 inhabitants; Grand Rapids, 168,592; Flint, 156,492; Lansing, the capital, 78,397.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) ...	1935	2,329,000	3,588,000*	\$21,887,000
	1934	2,373,000	1,914,000*	33,112,000
Corn	1935	1,476,000	51,660,000	30,996,000
	1934	1,392,000	33,408,000	27,060,000
Oats	1935	1,308,000	43,818,000	12,269,000
	1934	1,222,000	28,717,000	14,071,000
Wheat	1935	817,000	17,919,000	13,622,000
	1934	793,000	11,120,000	9,787,000
Dry beans	1935	540,000	4,806,000*	9,852,000
	1934	536,000	3,377,000*	9,287,000
Potatoes	1935	263,000	24,985,000	12,492,000
	1934	268,000	34,304,000	10,291,000
Sugar beets	1935	115,000	712,000*	.....
	1934	117,000	999,000*	5,914,000
Barley	1935	201,000	5,326,000	2,450,000
	1934	188,000	3,384,000	2,403,000
Apples	1935	.....	9,177,000	6,057,000
	1934	.....	6,464,000	5,430,000

* Tons. * 100-lb. bags.

Mineral Production. The quantity of iron ore mined in the State rose to 5,039,144 gross tons (1934) from 2,433,949 (1933). The shipments of ore exceeded the production in both years, but the

excess tapered off in 1934. The quantity shipped attained 5,497,953 gross tons in 1934 as against 6,099,031 for 1933; the totals by value were \$15,646,165 (1934) and \$18,442,073 (1933). The reserves of iron ore as reckoned by the State's tax commissioners totaled 162,213,481 gross tons at the outset of 1935.

The mining of copper improved somewhat, attaining a total of 70,102,754 lb. of copper (1934), as against 68,999,174 for 1933; by value the yearly total rose to \$3,857,269 (1934) from \$2,998,600 (1933). Though the production of coal, some 631,000 net tons for 1934, did not suffice for coking operations on a great scale, the steel-using industries of the State tended to promote the increase of the production of coke. The quantity produced rose to 2,547,747 net tons (1934), from 2,341,081 (1933); the value of the total for 1934 was \$14,348,536. Coal to the quantity of 3,890,465 tons, brought from other States, was used in 1934 for coking. The coke, in its turn, was largely consumed in blast furnaces to produce pig iron, of which the output increased to 644,895 gross tons for 1934, from 407,011 for 1933; and the yearly value to \$9,987,451 (1934) from \$6,181,318 (1933).

There were mined, in 1934, 281,033 short tons of gypsum, by value \$2,469,222. The production of salt diminished slightly to 2,012,370 short tons (1934) from 2,090,254 (1933); by value, to \$5,470,684 from \$5,679,737. The production of petroleum exceeded records for the third successive year, attaining some 10,708,000 barrels for 1934.

Education. The latest collated statistics on the public schools were those for the academic year 1933-34. Inhabitants of school age (from 5 to 19 years, inclusive) on May 31, 1934, were reported to number 1,392,822. The year's average total of membership in the public schools was 961,043. Of this total, 640,695 belonged to the elementary schools and 320,348 to the high schools. Not to count service of debt nor capital outlay, the year's expenditure for public-school education throughout the State amounted to \$59,159,876. The salaries of teachers, for the year, averaged \$1152.29.

Legislation in 1935, by an act for State aid and a system of equalization for the public schools, much amplified the State's share in public education; the act guaranteed free tuition in high school to all qualified pupils.

Charities and Corrections. The State Welfare Department, the body having in 1935 the State's central administrative authority in matters of the care or custody of persons, originated in a statute of 1921. It had for its executive head a director (Fred L. Woodworth). Responsibility for the divers branches of its work was assigned among five commissions: the State Welfare Commission, State Prison Commission, State Hospital Commission, State Correction Commission, and State Institute Commission. The first of these had seven members, the others five each. The Director and all the commissioners held by appointment of the Governor, confirmed by the State Senate, until replaced.

The State Welfare Commission licensed and supervised institutions and agencies, not directly maintained by the State, such as maternity hospitals, boarding homes for children, and charities soliciting public support; it supervised homes for the aged, county infirmaries, jails, probation, juvenile parole, the operation of mothers' pensions, and the laws as to dependent and neglected children. The other commissions divided among them the supervision of 17 State institutions.

The State maintained the following institutions: the State Prison; Michigan Reformatory, at Ionia; Branch Prison, Marquette; Boys' Vocational School (correctional); Girls' Training School (correctional); Michigan Children's Institute (handicapped children); School for the Deaf; School for the Blind; Employment Institution for the Blind; hospitals for mental patients, at Kalamazoo, Pontiac, Traverse City, Newberry, Ionia, and Ypsilanti; Michigan Home and Training School; and Farm Colony for Epileptics. The inmates of all these institutions numbered 29,007 on November 1; the State prisoners alone, 7348; the correctional schools, 778; the mentally disordered, 13,734; those in the Home and Training School (plus some maintained outside, in a county institution), 4933.

Legislation. Among the acts of the Legislature were those revising the system of pensions for old people; permitting the territory of counties to be differentiated into zones subject to diverse regulation as to occupancy and use; requiring teachers in the schools of higher education to take an oath of allegiance to the United States; and requiring the sale of eggs by weight.

Political and Other Events. The revision of the State's system of pensions for the aged was rendered necessary by the failure, as a revenue-bringer, of the \$2 head tax that had been imposed to meet the cost of the system. It was reported in March that 2,755,100 of the 2,939,409 persons liable for this tax had not paid. The State Supreme Court upheld on October 12 the validity of the emergency banking act of 1933, as to discharging from debt a reorganized bank despite the refusal of a considerable depositor to accept composition. The decision was important, in that 195 institutions had been reorganized under the act. The centennial of Michigan's acquisition of Statehood was marked by the issue on November 1 of a special 3-cent postage stamp.

Economic conditions in the State were greatly improved because of increased activity in the automobile-manufacturing industry. The year passed without serious labor troubles in the State, among people engaged in that industry. However, the American Federation of Labor organized the International Automobile Workers' Union in Detroit.

The Rev. Charles E. Coughlin, Catholic priest and advocate of social measures, continued his broadcasts by radio to a great nation-wide audience and exerted a particular influence on opinion in his own State of Michigan. He was condemned, as it appeared, though not by name, in an address of Cardinal O'Connell of Boston on May 23 referring to "those who stir uprisings and create discontent in the hearts of the poor." Discontent in the area of Detroit took the form during the summer of a popular movement against the high prices for food and particularly for meats; the protest started among housewives in Hamtramck and grew to serious proportions. The movement was hostile impartially to the New Deal and to the meat packers. Disquiet among the wage-earning group was much checked by a prevalent improvement of wages in the automobile industry.

Elections. A State election for the choice of Judges and some other officers was held on April 1. While no major National issues were involved, the election of a chiefly Republican ticket by a strong Republican majority tended to confirm the partisan trend shown in the previous November. An election held in the 3d district, to fill a vacancy in the Federal House of Representatives, December 17, was

won by a supporter of the Townsend Old Age Pension Plan. The winner, Vernon W. Main, who was also the regular Republican nominee, gained a 2-to-1 majority over the vote for his two opponents.

Officers. The chief officers of the State, serving in 1935, were: Governor, Frank D. Fitzgerald; Lieutenant-Governor, Thomas Read; Secretary of State, Orville E. Atwood; Treasurer, Theodore I. Fry; Auditor, John K. Stack, Jr.; Attorney-General, Harry S. Toy; Superintendent of Public Instruction, Dr. Paul Voelker.

Judiciary. Supreme Court: Chief Justice, William W. Potter; Associate Justices, Nelson Sharpe, Henry W. Butzel, Walter H. North, Louis H. Fead, Howard Wiest, George E. Bushnell, Edward M. Sharpe.

MICHIGAN, UNIVERSITY OF. A State institution for the higher education of men and women at Ann Arbor, founded in 1817. In 1934-35 the enrollment was 13,691. The registration in the 1935 summer session was 4066. The teaching staff was composed of 714 members. For current expenses, \$4,425,000 was received from the State, while approximately \$4,458,000 was derived from other sources. Gifts (included in the above) amounting to more than \$575,000 were received during the year, all for specified purposes; the larger part of this sum was intended for various research projects. Funds for the purchase of a carillon were donated by Charles Baird, '95, of Kansas City, Mo. In September, 1935, there was announced the gift of \$5,000,000 by the Horace H. Rackham and Mary A. Rackham Fund for the purpose of furnishing a building for the Graduate School and an endowment, the income of which is to be used to enlarge and improve the school's work. A very important action was taken by the State Legislature of 1935, which enacted a law preserving the principle of the old mill tax law, effective since 1867, whereby the University receives a continuing appropriation from year to year, based upon the valuation of taxable property in the State. Since the State property tax was abolished, however, the source of the University's appropriation is now the general fund of the State, rather than the proceeds of a property tax. The University libraries contained 926,396 volumes. President, Alexander Grant Ruthven, Ph.D.

MIDDLEBURY COLLEGE. A coeducational, nonsectarian college at Middlebury, Vt., founded in 1800. For the autumn term of 1935, 626 students were registered as undergraduates and 19 as graduates; of these 341 were men and 304 women. The enrollment in the special summer schools of French, Spanish, German, Italian, and English, conducted by the college, amounted to 618. There were 78 members on the faculty. The productive funds of the college in 1934-35 amounted to \$4,087,268.01, and the income for the year was \$330,878.11. Gifts to the college were \$21,651.55. The library contained 60,000 volumes. President, Paul Dwight Moody, D.D.

MIDDLE CONGO. See FRENCH EQUATORIAL AFRICA.

MID-TOWN TUNNEL. See TUNNELS.

MIDWAY ISLANDS. A group of islands in the North Pacific, some 1200 miles to the northwest of Hawaii. Area, 28 sq. miles; population (1930), 35. The islands contain a relay cable station and, in 1935, became a base of the transpacific air service of the Pan American Airways. By an executive order the islands were placed under the jurisdiction of the U.S. Navy Department.

MILITARY PROGRESS. During the year 1935 one had but to scan pictorial reviews in the

daily papers and magazines to note the far flung activities of all nations along the lines of military preparations on land, the sea, and in the air. *Get ready* has been the prevailing theme in all actions—civil and military—and the feverish haste in getting ready shows the tension and fear in the world.

The plebiscite over the strategical industrial area of the Saar determined overwhelmingly the desires of the population as to its future political status. France receives 60,000,000 gold dollars and 11 million tons of coal for her coal interest and Germany is to observe and protect the rights of all residents, whatever that signifies. The settlement of that question took from the realms of dispute one of Europe's most baffling sore spots.

The dispute between Italy and Ethiopia, the culmination of a series of border incidents early in the year, forced itself upon the attention of the League of Nations by the request of Ethiopia to halt Italian "aggression."

At the beginning of the year Europe's atmosphere seemed to be clearing and the tension of Germany's withdrawing from the League of Nations and the Disarmament Conference sensibly relaxed. The accession of the U.S.S.R. to the League and the settlement of the Saar and Hungarian-Yugoslav questions apparently increased the prestige of the League. When the League imposed sanctions in October on Italy after an almost unanimous agreement among its nation members that Italy was the "aggressor" there was no question that it had asserted its worth and power. See LEAGUE OF NATIONS.

The *Armaments Year Book* for 1935 issued by the League of Nations on June 24, 1935, gives what it calls the "minimum figures for the world's military expenditures." These show that the arms bill has risen 1,500,000,000 gold dollars at the old parity in the last ten years. The figures for the great powers for the year 1935 are as follows:

Great Britain	£.	107,000,000
France	franc.	10,623,000,000
Germany (1934)	marks	894,000,000
Italy	lire.	4,300,000,000
Japan	yen.	1,021,000,000
U S S R.	rubles	6,500,000,000
United States	dollars	902,000,000

The British figures do not include the dominions or colonies and the German figures are unusually low. The U.S.S.R. increase is the largest. The year book presents information for the first time on the military situation in the mandated areas, on anti-gas organizations, on military preparation and training for the young.

As the year closes Eastern Asia is very much embroiled. On Christmas Eve martial law was declared in the native district of Shanghai. Japan moved her marines into the city, using tanks to patrol the tense streets. In the north and west Japan's army and her influence press forward.

China. The Autonomy moves in North China became serious enough the latter part of November for the Great Powers to take notice. If carried through Japan will have executed another "forward pass" and five provinces having a combined area of 470,991 sq. mi. will have passed under Japanese control. The new situation drawing attention to the provinces of Chahar, Suiyuan, Shansi, Hopei, and Shantung is without doubt the programme Japan has been pursuing for several years. The importance of the move lies in the possible fate of China proper. Two reasons have been given for the move—to beat back a communist wave about

to engulf North China and Mongolia, and anti-Japanese activities must be curbed. Whichever is correct, if either, Japan's objects are clear—the removal of all remnants of Chinese administration in the northern provinces not amenable to Japanese influence.

See CHINA and JAPAN under *History*.

France. Early in the year the Air Commission of the Chamber of Deputies adopted a proposal authorizing reserve flying officers to be transferred into the active army for periods up to 10 years.

According to figures given by General Maurin the males born in 1915 numbered only 124,000 indicating that between 1936 and 1939 the number of men of military age would be only half the normal number of 240,000. On Apr. 23, 1935, 120,000 men born in 1914 began their departure for preliminary training barracks. The new conscript contingents brought the official estimate of soldiers stationed in France to 410,000. They are to serve 18 months—those to be called during 1936, the class of 1915, will serve two years.

France's military budget for next year was announced at 6,953,000,000 francs. An additional billion francs for defense, in view of "German massive rearmament," was approved on December 14 by the Chamber of Deputies.

A new decree in October enables the government to lift spy trials out of police courts and turn them over to military courts.

In the French manoeuvres it was disclosed that the new motorized army was found vulnerable to aeroplane attack. Dust clouds 15 miles away disclosed the troops' route of march—observers reporting they could count the number of trucks at an altitude of 12,000 feet. Planes swooped down within bombing range of the ground forces and disappeared before troops could retaliate.

During May, France and the U.S.S.R. signed a mutual assistance pact (see FRANCE under *History*).

Germany. Early in January the Reich Ministry of Defense published an article virtually announcing universal military service in Germany. In April, Hitler decreed compulsory army service in Germany.

Early in the year formal repudiation of the military clauses of the Versailles Treaty by the German government—together with a very material increase in the military and aerial forces—brought into the open a situation which had been developing for years. The increase in her army was entirely in keeping with the general increase in military forces and equipment taking place throughout the world.

The editor of *Jane's All the Worlds Aircraft* for 1935 provides striking evidence that the intensive aircraft rearmament is world-wide. He drew attention to the difficulties of compilation of data, due to the policy of secrecy on the part of army, navy, and air service authorities of all nations. In the section relating to Germany there is no reference to the types the new firms are constructing and comparatively little about the military aircraft the older firms are known to have produced. He points out that Germany now employs, in addition to established aircraft firms, makers of warships and locomotives to make aeroplanes.

According to Frank H. Simonds in the October *Current History*, Germany is the chief war threat of a general war in Europe. "No sensible Briton can question the fact that for his country the eventual menace now taking form in the North

Sea must be far more serious than the peril that has already arrived in the Mediterranean."

Great Britain. According to an announcement of the War Office on Dec. 22, 1935, Great Britain's "contemptible little army" is to undergo a sweeping modernization. Horse cavalry will virtually disappear from the regular army and armoured cars, light tanks and other equipment more suitable for modern warfare is to supplant it. The existing cavalry division and tank brigade are to be converted into a new mobile division with two mechanized cavalry brigades instead of one, each mechanized cavalry brigade will have an armoured cavalry regiment and will comprise two motor cavalry regiments instead of three.

In the reorganization, infantry battalions of the regular army will be converted into machine gun battalions and rifle battalions. The effect of the changes will be to create smaller, more wieldy divisions and increase the proportion of supporting arms compared with riflemen.

In *Jane's All the Worlds Aircraft* for 1935 we find—"The year 1935 has been particularly interesting because the British Government decided quite suddenly to expand the Royal Air Force to something like three times its size. The full result of that policy is not yet evident, because the details of the very latest airplanes and motors being built for the R.A.F. are not yet released for publication."

Since May when the two year expansion programme of the Air Force was announced, 165 machines have been added to the first line air establishment making the number of machines therein about 1180 according to the information given to the House of Commons Dec. 18, 1935.

Italy. In 1906 Great Britain, France, and Italy negotiated an agreement the preamble of which declared it to be the common interest of all three nations "to maintain intact the integrity of Ethiopia (Abyssinia)." The first article provided for their cooperation in maintaining "the political and territorial status quo in Ethiopia."

As a member of the League of Nations, Abyssinia contends that her independence is guaranteed in addition by the entire membership of the League. It is known that the immediate cause of trouble between Italy and Ethiopia was a trifling incident which under ordinary circumstances would have caused no more than mere diplomatic correspondence. It would appear that a deeper reason for Italy's actions may be found in her long cherished plan for a railway to unite her two east African colonies—Eritrea and Italian Somaliland.

On December 6, the League of Nations sanctions in their third week had so far failed to halt the war in Eastern Ethiopia or weaken the Italian determination to conquer Ethiopia.

Up to Dec. 15, 1935, after ten weeks of strenuous effort following months of preparation the Italian forces in Ethiopia have gone a very little way toward solving the problem that has faced them. In the north, despite lack of opposition, they have not yet penetrated so far as the small Italian forces did in 1895 and have failed to lure the enemy into battle under conditions in which superior armament might have material effect.

The moral impression produced by air bombardment has not been exploited by the Italian land forces pressing their advance before the effects subsided. These will be more difficult to recover now that hard experience has taught the Ethiopians to diminish the target. An exception on the southern front was in the significant success at Gorahai

achieved by a combination of sustained air bombardment and quick following up. See **ETHIOPIA** and **ITALY** under *History*.

On Nov. 28, 1935, Mussolini ordered about 2,500,000 Italian school boys to receive officers' training. A 30-hour obligatory military course in grade, intermediate, and university classes with examinations counting toward graduation has been included. Arms tactics, map reading, and modern courses in warfare were some specified topics.

Japan. On Nov. 30, 1935, the Japanese Cabinet approved the budget providing for military expenditures aggregating 1,038,000,000 yen of which the army receives 497,000,000. This is the largest army appropriation in the history of the Empire. The maintenance of the army in Manchoukuo takes 170,000,000 yen. See **CHINA** and **JAPAN** under *History*.

Philippine Islands. The National Assembly of the Philippine Commonwealth approved on Dec. 14, 1935, the Philippine Defense Act. It appropriated \$8,000,000 for military purposes including the customary \$3,500,000 for the constabulary and \$1,700,000 for the purchase of equipment. On Dec. 21, 1935, the Act was signed by President Quezon. The plan provides for universal military training contemplating 500,000 trained reservists by the time of complete independence in 1945. Filipino youths are to begin military training at the age of 10 years. The size of the regular army is to be 19,000 officers and men, 3500 of whom will be used for public purposes. See **PHILIPPINES** under *History*.

Turkey. On May 18, 1935, the Cabinet approved the plan of compulsory pre-military training for more than 500,000 Turkish children of both sexes with practical training to be given boys and girls who still have not reached their teens, all under the general staff of the Army. The number of reserve officers was also greatly increased.

Turkey has elaborated a draft plan to avoid violation of the various defense methods she agreed to renounce by the Treaty of Lausanne and for her rearmament. Turkey is to inform the League of Nations beforehand as soon as her plans are sufficiently advanced to become practicable. Great Britain and France have indicated their willingness to support the demands of Turkey but as the year closed nothing definite had been done.

U.S.S.R. During April of 1935, the Vice Commissar of War Tukhachevsky announced that the strength of the Red Army had been increased by 56 per cent in the last year. Walter Duranty, New York Times Apr. 28, 1935, pointed to four special features in connection therewith: (1), it is the largest standing army in the world, with a peacetime force of 940,000 men and that figure probably did not include railroad and frontier guards and special troops—long term enlisted men totaling 150,000 to 205,000; (2), the Red Army is now highly mechanized, well equipped, apparently efficient and well disciplined; (3), there is a general weakness of transport in the Soviet Union and (4), the Red Army is popular and privileged and is a school and training for life as well as an army.

The high command, staff college, and schools differ little from foreign systems. One feature is unique, the Political Administration. It includes the function of military intelligence but in addition the more related task of organizing and supervising the political, mental, moral, and physical training of the army from the top to bottom.

Tukhachevsky told the All-Union Congress that

the Red Army had been mechanized fourfold in the last four years—the gains in percentages—aviation 33 per cent; baby tanks 2475 per cent; light tanks 760 per cent; medium and heavy tanks 792 per cent; infantry machine guns 200 per cent; aviation and tank machine guns 450 per cent; heavy artillery 200 per cent.

Due to transportation difficulties permanent fortifications on both the western and eastern "fronts" have been erected and garrisoned with large effectives, hence the increase in personnel. The Red Army is really an instrument of national defense—not of aggression and all civil and military training is along defense lines—to protect against enemies.

In the army of the Soviet Union there were 2 or 3 women's battalions working in the signal corps—telegraph, telephone, and radio; about 12 women fliers and possibly 3 or 4 women officers. The much mentioned women's battalions and the like are purely volunteer organizations outside the regular army machine (Apr. 27, 1935, N. Y. Times).

Under date of Apr. 10, 1935, the Associated Press, Moscow, reported that 5,000,000 young Russians, both men and women, must make parachute jumps and study aeroplane motors. The order made "military and technical training compulsory for all young Communists, members of both sexes between the ages of 16 and 24 who belong to the junior organization of the Communist Party and young working people not affiliated with the organization." The training prescribed included "at least one jump with parachute from a parachute tower during 1935"; no less than 30 hours' study of aeroplane motors, training in marksmanship, and in some cases aeroplane and glider piloting. Anti-gas drills also were prescribed.

An interesting note comes out of the U.S.S.R. telling of the quick mobility of the Soviet Army's new offensive weapon—its parachute and aeroplane infantry. Commissar Voroshilov reported 11,200 men transported simultaneously by air during manoeuvre and safely landed with full light infantry equipment—more than one division in man strength. Three thousand members of that aerial army landed with parachutes coming down behind the lines of a theoretical enemy, all equipped with automatic rifles and light machine guns. Transport planes landed at the rate of 1000 men every 16 minutes and put on the ground 8200 more soldiers.

United States. The All-American Air Races at Miami, Jan. 10, 1935, showed new conditions in air manoeuvres and tactics. The attack plane is a low flier—its engines hushed by the use of collective rings for the exhaust. Coming over trees the planes will be upon one before he knows it. Their formations cover wide areas. In a moment they can deliver a heavy attack of machine gun fire and bombs and are swift enough to strike and get away again. Four of the guns of these planes are set in the wing and body structure, and one is set in the rear cockpit. The bombs are released by means of a trigger in the stick. One new type of parachute bomb can be dropped from 75 feet. There is a four second lag when dropped from 75 feet so that in those four seconds the attack plane has flown 600 feet beyond the point of explosion. The plane was a Curtiss A-123, two-place, low wing monoplane, 720 h.p. Wright Cyclone engine, with a top speed of 180 m.p.h. and a cruising speed of 150 m.p.h. with a full military load including 5 machine guns and 300 pounds of either fragmentation or chemical bombs.

The Air Corps system of instrument (fog) land-

ing has been successfully applied to high speed tactical aeroplanes.

On Jan. 2, 1935, the War Department awarded the contract for 35 basic training type aeroplanes at a cost of \$754,738. They are two-place, low wing monoplanes, powered by Wright Whirlwind 350 h.p. engines, with an expected cruise speed at better than 160 m.p.h. Very slow landing speed has been assured by the special trailing edge flap incorporated by the designer.

On Aug. 1, 1935, War Department records indicated that the regular army had 1196 aeroplanes of all types—350 pursuit, 130 bombers, 100 attack, 237 observation, 21 amphibian observation, 61 transport, 153 basic training, and 144 primary planes. The National Guard had 129 observation, the Organized Reserves 29 observation, and 53 primary training planes. There were under contract 110 attack, 71 observation, and 30 basic training planes.

On Dec. 17, 1935, the War Department awarded contract for 100 attack planes, with spare parts for 15 planes, at a cost of \$2,560,074. The type of attack plane contracted for has a top speed of 220 miles per hour. It is an all-metal, low wing monoplane with retractable landing gear, of two-place, single engine design. It is intended for operations against ground forces and in support of the land forces of the air force. It is built to operate unusually close to the ground and to take advantage of the natural defensive features of the terrain and to escape ground fire. It has a gas capacity of eight hours at cruising speed and a service ceiling of 20,000 feet. It should take off and clear a 50 ft. obstacle with full load within 1500 ft. It has four 50 cal. fixed machine guns, and one 30 cal. flexible machine gun mounted in the rear cockpit, and is designed to carry 20 of the smaller type of bombs or 4 of the larger type. Also to carry an alternate load of chemicals to be dispensed from tanks and is equipped with adequate transmitting and receiving radio equipment. This aeroplane incorporates devices to increase lift and drag in order to reduce the speed of landing and take off to approximately 60 miles per hour and to increase gliding angle above the normal. The crew consists of a pilot and rear gunner. Pilot controls the fixed guns which fire straight forward, and release of bombs and chemicals. Rear gunner's function is primarily to protect the aeroplane from the attack of hostile aircraft. It is powered with a Pratt Whitney two-row radial engine of 750 h.p.

Another contract was awarded by the War Department on Dec. 21, 1935, for 103 of the most modern bombers known to the United States, the cost to be in excess of \$9,046,000 with production started at once in two factories. The Douglas Aircraft Company of Santa Monica, Cal. is to build 90 twin engined, all metal, low winged monoplanes powered with two 850 h.p. Cyclone engines at a cost of approximately \$72,200 each. The Boeing Aircraft Corporation of Seattle, Wash. is to build 13 of the 4-engined "flying fortress" type of bombing planes. It is understood that the cost of each will be \$196,000.

On June 7, 1935, the bill providing for the increase of an additional appointment to West Point for each Senator and Congressman was signed by the President. As now provided each will have 3 appointments. There will be 5 from the District of Columbia, 132 from the United States at large, 40 from "honor schools" as designated by the War Department, in addition to the number now authorized to be appointed from the enlisted men of

the regular army and national guard and sons of deceased officers, soldiers, and marines (S.2105). The bill also provides for calling to active service annually 1200 reserve officers as follows: 50 per cent 2d lieutenants, 30 per cent 1st lieutenants, 15 per cent captains, and 5 per cent field officers.

The Thomason Act, H.R.6250, amending the National Defense Act, was approved by the President on Aug. 30, 1935. It authorizes the President to call annually for a period of active duty of not more than one year for one officer, not to exceed 1000 reserve officers of the combatant arms and the chemical warfare service in the grade of second lieutenant. Also, for the period of 10 years beginning July 1, 1936, the Secretary of War is authorized to select annually 50 officers from those who have received this training to be commissioned in the regular army. Money must first be appropriated however to make it effective.

Protests against compulsory military training in colleges attained such large volume that the Secretary of War deemed it necessary to comment thereon in his annual report to the President. He scored such protests as "based upon the fallacy that such training instills a spirit of militarism in the youth of America." The fight of the student organizations is over the making entry into the R.O.T.C. optional instead of compulsory. Notwithstanding, there was appropriated for the next fiscal year \$1,000,000 for extending R.O.T.C. units in public high schools and colleges.

Maj. Gen. Malin Craig was appointed Chief of Staff with the rank of General on Oct. 2, 1935. He graduated from West Point on Apr. 26, 1898.

A significant feature of the new proposal in connection with regimental infantry organization is the separation from infantry battalions of their machine gun companies, the segregation of the latter within each regiment as a consolidated unit in which will be included the mortar. In each regiment there will be three rifle or light battalions and one supporting or heavy battalion. The light battalion will have no weapon not readily carried by a marching soldier. Speedy motor trucks will provide transportation for the heavy unit. The purpose of the regrouping is marked increase in mobility. The change in organization is due to modern semi-automatic rifles and newly developed machine guns of very light weight. The battalion will possess a fire power greater than will the old machine gun company.

The problem of protection against gas raises the same difficulties with regard to mobility that it did 1000 years ago. The warriors of old incased themselves in suits of armor that eventually immobilized them. Later high powered rifles and machine guns and artillery drove them into the ground for protection. Larger tractor drawn artillery drove them deeper until finally the extensive underground system of trenches and dugouts of the World War and armies of millions became immobilized.

The development of chemical warfare reduced this protection and now there is demand for protection against chemicals. This involves protection from head to foot with hoods, masks, and protective clothing similar to the visored helmets and suits of armor of old. To evolve protective covering for modern armies is the real problem and its difficulty is the maintaining of mobility. So any protective covering must be of light material insuring easy movement when worn.

In submitting his last report as Chief of Staff General MacArthur stated that for the first time since 1922 "the Army enters a new fiscal year with

a reasonable prospect of developing itself into a defense establishment commensurable in size and efficiency to the country's minimum needs."

In the appropriation bill Congressional approval was given to increase the enlisted strength 46,250 and recruiting began on July 1, 1935. For economic reasons the entire increase is to be absorbed in the lowest enlisted grade, i.e. unrated privates at \$21 per month. The increase voted was intended to bring the strength of the army to 165,000 men but the Budget Bureau stepped in and withholding \$9,000,000 forced curtailment of recruiting so that by Dec. 31, 1935, the total strength was approximately 140,000.

The new promotion bill directs promotion to 1st lieutenant at the end of 3 years; to captain at the end of 10 years; no officer can reach the grade of lieutenant colonel with less than 20 years' service; nor to the grade of colonel short of 26 years' service. A more satisfactory flow of promotion has been aimed at in that legislation.

With \$10,000,000 made available by PWA motor vehicles for accomplishing a partial motorization in both the regular army and the national guard have been provided. Also \$6,000,000 for ammunition needs and \$7,500,000 for procurement of aeroplanes.

A procurement programme in modern tanks and combat cars has been initiated with 78 in production and 69 provided for. A total of 3340 of the new semi-automatic rifles has been authorized.

The existing motorization programme calls for a more sweeping substitution in the national guard than in the regular army principally for the reason that any set of conditions requiring the mobilization of the national guard would imply the establishment of a rather formal theatre of operations and because motorization would facilitate mobilization.

Officers and enlisted men of the army can now have their liquor, drink it in uniform, and have it on the military reservation. An obscure clause in the Liquor Control Bill passed by Congress on the last day of the session and signed by the President repealed the wartime restrictions.

MILK. See DAIRYING.

MILLS COLLEGE. A college for women in Oakland, Calif., founded in 1852. The enrollment in the autumn of 1935 was 551, while that for the summer session was 214. The faculty numbered 85 members. Ten tutors were in residence with the students and furnished preceptorial aid. The total productive funds amounted to \$1,553,724 and the total assets to \$4,485,319 while the gross income for the year ending June 30, 1935, was \$590,877. The library contained 67,500 volumes. President, Aurelia Henry Reinhardt, Ph.D.

MINERALOGY. With the close of the year 1935 the *American Mineralogist*, the official journal of the Mineralogical Society of America, completed its twentieth volume. It has occurred to the reviewer that this event, marking as it does the close of two decades of American progress in this science, should be commemorated by a summation involving not only the growth of this journal but the part that America has been taking in the development of mineralogical science.

During the last 20 years the *American Mineralogist* has grown from a mere "collectors' magazine" with a very limited circulation to an authoritative and widely read organ taking rank with similar European publications of 50 or more years' standing. The stimulation to mineral research that has resulted from an organ of such a high standard is reflected in the number of new species described from North American occurrences during the past

decade. In this period fully one third of the world's new minerals have been announced by American scientists in the pages of the *American Mineralogist*.

A useful paper in the field of determinative mineralogy is that published in the *Mineralogical Magazine* (of London) by J. Adam Watson on "Color reactions in the micro-chemical determination of minerals." In his endeavors to find a simple and yet accurate method for the determination of the elements involved in usual mineral composition, which he could employ in teaching his University of Edinburgh students, Professor Watson has succeeded in eliminating from the micro-chemical method much of the elaboration which up to the present burdened it. By employing 33 reagents, distinctive color reactions for 37 elements are obtained. The two tables that accompany Professor Watson's excellent paper are clear and eminently usable.

The new mineral species discovered during the year 1935 is average both in number and importance.

Among the rapidly increasing number of new African minerals, which have marked the recent economic exploitation of the "Dark Continent," are two new bismuth minerals, from Cape Province. A bismuth oxychloride, differing from daubreeite, but identical with the artificial Bi OCl, from Steinkopf, Namaqualand, has been named *bismoclite*. It occurs in pale grayish to creamy white crystalline masses.

A pale yellow earthy carbonate of lead and bismuth from Bokspuit farm, Langklip, Gordonia, has been named *bokspuite* from the locality.

Lusakite, a cobalt bearing silicate, related to staurolite on crystallographic grounds, was found in Northern Rhodesia, at an obscure locality about 80 miles east of Lusaka, the capitol of Northern Rhodesia, from which place it takes its name. Tabular, orthorhombic crystals of *lusakite* are black to deep cobalt blue in color. The province of Katanga, during 1935, added to the list of new mineral species a hydrous oxide of cobalt and copper, found at Mindigi, a small village on the southwest border of the province, and named *Mindigit* from the locality. It occurs in pitch black, shining colloidal crusts, coating hematite.

A new addition to the list of native alloys recovered from residues of platinum grains from the Ural Mountains of Russia, has been shown to be a solid solution of gold and osmium in isometric iridium. This new mineral that occurs in silver white, brittle grains has been appropriately named *aurosmirid* (*aur* + *osm* + *irid*). A new highly basic chloroarsenate of lead was discovered at the celebrated source of new and rare minerals, Langban, Sweden. The mineral occurs as pale sulphur yellow, cleavable scales associated with dolomite and hausmannite. It has been named *Sahlinite*, in honor of Dr. Carl Sahlin, a Swedish metallurgist.

The now famous locality of Scawt Hill, County Antrim, Ireland (for minerals previously found in this place see INTERNATIONAL YEAR BOOKS for 1929, 1930, and 1933), has furnished a new hydrous calcium aluminate, named *hydrocalumite*, in abbreviation of its chemical composition. The cleavage flakes which characterize hydrocalumite are colorless to light yellow, and vary in lustre from vitreous to pearly.

A new sulphate and carbonate of sodium has been found in drilling a bore hole at Sarles Lake, Calif., and was named *burkeite* in honor of Mr. W. E. Burke, who separated the artificial salt from the brines of Sarles Lake in 1919. The white orthorhombic crystals are often united in x-shaped twins.

Austinite, a new hydrous zinc calcium arsenate, from the copper workings at Gold Hill, Utah, occurs in minute colorless orthorhombic prismatic crystal, whose bisphenoidal symmetry gives right and left individuals. The mineral is named in honor of Prof. Austin F. Rogers of Sanford University.

A new hydrous copper molybdenum oxide has been named *lindgrenite* in honor of Prof. Walde-mar Lindgren, of Mass. Institute of Technology. Lindgrenite was found in the copper mine at Chu-quitamata, Chile. It occurs in green, tabular, mono-clinic crystals.

MINIMUM WAGE. The first interstate compact on minimum wage was signed on May 29, 1934, at Concord, New Hampshire, the following States participating: New Hampshire, Rhode Island, Maine, Connecticut, New York, Pennsylvania, and Massachusetts. This compact was entered into under Article 1, Section 10 of the Constitution and is an extension of the principle of this section from its common application to waterways, bridges, etc., to the field of labor legislation. The signing of the document was the consummation of a movement begun by the New Hampshire authorities in 1931. Underlying the effort is an aspiration to equalize competitive conditions among the signatory States with the idea of stabilizing industry. The compact does not supersede existing laws, but safeguards them.

Massachusetts and New Hampshire have enacted legislation to meet the standard of the compact. The original document has been filed with the Department of State in Washington and a certified copy sent to each State signing. A resolution authorizing the general application of the principle involved was introduced into the Seventy-fourth Congress but no action was taken on it.

This compact may be a way of propping up the sagging wage scales in certain low-wage industries, like the needle industries, which benefited materially from the NRA codes but which experienced a reversion when the codes were declared unconstitutional. Reports of field investigations made in the fall of 1935 indicate that these industries have abandoned the artificial bottom for wages established under the codes and fallen back upon competition as the standard which will determine payments.

Cuba. An interesting effort to use minimum wage legislation to prop up low wage scales was made in Cuba by Decree-Law No. 727, issued on Nov. 30, 1934, and extended by Law No. 22 of Mar. 19, 1935. Under this legislation minimum daily wages of \$1 in cities and in the sugar industry, and 80 cents in rural districts, were established. No exemption was allowed for either contract work or piecework if the work performed occupies at least eight hours in any single day. These latter two methods of employment had been resorted to under the Decree-Law in an effort to escape its provisions.

MINING AND METALLURGICAL ENGINEERS, AMERICAN INSTITUTE OF. An organization founded in 1871 and incorporated under the laws of New York State in 1905 "to promote the arts and sciences connected with the economic production of the useful minerals and metals and the welfare of those employed in these industries." It is made up of 27 local sections and has 31 student chapters in American colleges. On Nov. 15, 1935, there were 8041 members, distributed as follows: Honorary, 16; members, 5576; junior members, 852; associates, 614; student associates, 874; Rocky Mountain members, 104; and junior associates, 5.

In addition to the monthly meetings of the local sections and regional meetings held in various important mining or metallurgical centres, an annual meeting, or four-day convention beginning on the third Tuesday in February, is held in New York City. The medals and prizes awarded by the society during 1935 for notable work in the field of mining and metallurgy were: The William Lawrence Saunders Gold Medal, to James MacNaughton; and the J. E. Johnson, Jr., Award to Francis Marion Rich.

The institute publishes *Transactions*, an annual in several volumes containing the best papers of the year on mining and metallurgical subjects; *Mining and Metallurgy*, a monthly magazine; the *Directory*, which constitutes a "Who's Who" in the profession; and a series of individual technical pamphlets. In connection with three other societies it maintains the engineering societies library and an employment bureau. The officers elected at the 1935 convention were: President, Henry A. Buehler; vice presidents, Henry Krumb, Edgar Rickard, John M. Lovejoy, Paul D. Merica, and Louis S. Cates; treasurer, Karl Eilers; and secretary, A. B. Parsons. Headquarters are in the Engineering Societies Building, 29 West Thirty-ninth Street, New York City.

MINNEAPOLIS-ST. PAUL. See SEWER-AGE AND SEWAGE TREATMENT.

MINNESOTA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,563,953; July 1, 1934 (latest Federal estimate), 2,602,000; 1920 (Census), 2,387,125. Minneapolis (1930) had 464,356 inhabitants; St. Paul, the capital, 271,606; Duluth, 101,463.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	4,507,000	148,731,000	\$66,929,000
	1934	4,507,000	76,619,000	58,230,000
Oats	1935	4,897,000	181,189,000	41,673,000
	1934	3,767,000	72,703,000	33,443,000
Hay (tame) ...	1935	2,468,000	4,319,000*	22,027,000
	1934	2,560,000	2,154,000*	30,802,000
Barley	1935	2,304,000	58,752,000	21,738,000
	1934	1,536,000	24,115,000	19,051,000
Wheat	1935	1,874,000	19,676,000	20,039,000
	1934	1,242,000	12,534,000	12,428,000
Potatoes	1935	334,000	28,390,000	11,356,000
	1934	334,000	23,380,000	8,651,000
Flaxseed	1935	607,000	6,450,000	9,675,000
	1934	580,000	3,480,000	6,020,000
Rye	1935	495,000	9,900,000	3,465,000
	1934	291,000	2,474,000	1,682,000

* Tons.

Mineral Production. The State's predominant mineral industry, the mining of iron ore, not only held the improvement made in 1933 but further augmented yearly production to 15,389,870 gross tons for 1934, from 11,948,596 for 1933. The product of 1934 had an average value of \$2.65 a ton. The year's production fell somewhat short of shipments; these totaled 15,768,418 tons, and by value, \$41,843,148. As estimated by the State tax commission the reserves of iron ore in the State on May 1, 1934, totaled 1,256,068,447 gross tons.

Education. Many teachers otherwise unemployed continued to receive support from the Federal Government, through the FERA, which furnished money with which they were paid to conduct classes in the education of adults. The number of teachers thus engaged approximated 800, as against 500 or 600 reported for the year previous. The 47,381 adult pupils received instruction in 6023 classes, conducted at 417 centres.

Enrollments of pupils in the school districts, for

the academic year 1934-35, totaled 556,022. Of these, 417,663 were enrolled for elementary instruction (inclusive of grades from 1 to 8); 126,182 were in high-school grades (through grade 12); 2041, in junior colleges; 10,136, unclassified. The year's expenditures for public-school education totaled \$40,454,837. The monthly salaries of teachers, except those in the three chief cities, averaged \$135 for men and \$85 for women.

Charities and Corrections. The State maintained supervision over institutions for the care and custody of persons, under the laws in force in 1935, through a State Board of Control. The board was composed of three six-year appointees, one by law a woman. Under this board were a number of administrative divisions, concerned respectively with children, the blind, soldiers' welfare, tuberculosis, the insane, and other fields.

The State institutions and their populations of Nov. 1, 1935, were: State asylums, at Anoka (1342), Hastings (1050), and Willmar (1466); State hospitals, at Fergus Falls (1937), Rochester (1516), and St. Peter (1953); School for the Feeble-Minded, at Faribault (2255); Colony for Epileptics, Cambridge (860); School for the Blind, Faribault (123); School for the Deaf, Faribault (309); State Public School, Owatonna (493); State Training School for Boys, Red Wing (337); Home School for Girls, Sauk Centre (290); State Reformatory for Women, Shakopee (73); State Reformatory, St. Cloud (996); State Prison, Stillwater (1459); Sanatorium for Consumptives, Ah-gwah-ching (353); Hospital for Crippled Children, St. Paul (231).

Legislation. The regular biennial session of the Legislature enacted a measure to provide pensions for old people. The measure was designed to qualify the State to receive from the Federal Government the subvention to such pensions offered under the terms of the Social Security Act (see *UNITED STATES Congress*). The Governor, however, signed a copy of the bill that did not correspond with its final form. On this account the State Attorney-General ruled that the act was null. A measure was passed to provide \$10,000,000 for use in the succor of the indigent during the ensuing two years. The sum of \$2,000,000 was appropriated for seed loans to be made to needy farmers, at not over \$300 each. For the cost of feeding livestock where feed had run short on account of the previous season's drought, an immediately available appropriation of \$500,000 was made on February 27, under pressure from farmers. The total of all appropriations for the two years ahead approximated \$74,000,000. The rate of the State tax was raised to the highest point in the State's history.

Governor Olson sought in vain to have the Legislature carry out his campaign proposals of 1934 for a "cooperative commonwealth." In opposing him it had to resist the importunity of thousands of the Governor's partisans, who beset the Capitol.

Political and Other Events. The grants of the FERA toward support for the unemployed in the State were suspended for a time in March, because the State had not yet made provision satisfactory to the Federal authorities for meeting part of the cost. There occurred agitations both in St. Paul and in Minneapolis, for more generous dispensations of public money for the unemployed. Two men were killed and some 30 wounded at Minneapolis on September 11 in an affray with the police, during the strike of employees of the Flour City Iron Works. Governor Olson ordered the

plant of this concern to remain closed until the strike had been settled.

Twelve persons sought as participants in the abduction of Edward G. Bremer, a banker of St. Paul, on Jan. 17, 1934, were run down by agents of the Federal Department of Justice. Brought to St. Paul, five were convicted under the Federal law and sentenced to various terms of imprisonment, of which the highest was for life.

Officers. The chief officers of the State, serving in 1935, were: Governor, Floyd B. Olson; Lieutenant-Governor, Hjalmar Petersen; Secretary of State, Mike Holm; Treasurer, Julius A. Schmahl; Auditor, Stafford King; Attorney-General, Harry H. Peterson; Commissioner of Education, John Gunderson Rockwell.

Judiciary. Supreme Court: Chief Justice, John P. Devaney; Associate Justices, Andrew Holt, Clifford L. Hilton, Royal A. Stone, I. M. Olsen, Charles Loring, Julius J. Olson.

MINNESOTA, UNIVERSITY OF. A coeducational state institution for higher learning in Minneapolis, founded in 1851. The 1935 autumn registration was 13,959, while the summer session enrollment for the same year was 4827. The faculty numbered 612, an increase of 24 over the previous year. The income for the year ending June 30, 1935, amounted to \$8,601,060. Gifts received during the year totaled \$218,715, including \$50,000 from the Rockefeller Foundation for the Institute of Child Welfare, \$45,000 from the Rockefeller Foundation to be used for a Fluid Research Fund, \$10,000 from the General College Carnegie Fund and \$37,618 from the Carnegie Foundation for the Advancement of Teaching for staff retirement allowances. The total of endowment funds for all purposes was \$11,886,970 on June 30, 1935. Additions during the year included a gift of \$255,000 from Josephine L. Merriam. Income from endowment funds for the year totaled \$256,885. The Indoor Sports Building was completed at a cost of \$350,000 and a terrace addition is being constructed this year at a cost of \$32,000. An addition to the Women's Gymnasium is also under construction at an estimated cost of \$95,000. The State Legislature appropriated \$87,000 for the building and equipping of a Hospital Addition. The Library contained 785,054 volumes. Chancellor, Lotus Delta Coffman, LL.D.

MINORITIES. See LEAGUE OF NATIONS; BELGIUM, CZECHOSLOVAKIA, FINLAND, GERMANY, POLAND, and YUGOSLAVIA under *History*; JEWS.

MISSISSIPPI. Population. On Apr. 1, 1930 (Fifteenth Census), 2,009,821; July 1, 1934 (latest Federal estimate), 2,057,000; 1920 (Census), 1,790,618. Jackson, the capital (1930), 48,282.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops in 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1935	2,622,000	1,260,000 ^a	\$71,379,000
	1934	2,485,000	1,143,000 ^a	71,419,000
Corn	1935	2,693,000	36,356,000	29,085,000
	1934	2,748,000	40,121,000	33,702,000
Hay (tame) ...	1935	343,000	376,000 ^b	4,136,000
	1934	360,000	406,000 ^b	4,791,000
Sweet potatoes .	1935	64,000	5,888,000	4,416,000
	1934	71,000	7,526,000	5,569,000

^a Bales ^b Tons.

Mineral Production. The production of natural gas diminished again, to 9,170,130 M cu. ft. (1934) from 9,557,962 M (1933). The supply remained abundant but output was limited to demand. Except for 163,901 M cu. ft. from the Amory field, all the product of 1934 came from the Jackson field,

of which the known extent was increased by drilling to some 7500 acres.

Education. The inhabitants of school age, as reckoned for 1933, numbered 834,670. The latest published statistics summarizing the operations of all the public schools dealt with the academic year 1934-35. The enrollments in the public schools, for that year, numbered 600,712. Of these, 538,912 were in common schools or elementary grades, and 61,800 were in high schools. The year's current expenditures for public-school education totaled \$10,703,662. The yearly salaries of teachers averaged \$460.

Legislation. The Legislature met in special session on October 1 and dealt with measures of economic emergency recommended by Governor Conner. It appropriated \$1,000,000 for making advances to counties, to help them pay arrears due to teachers in public schools; set up a plan of State aid to the indigent unemployed; reduced certain taxes; raised the tax-exempt value of homesteads to \$2500, from \$1000; granted five years' exemption from taxes to lines for the rural distribution of electricity from the system of the TVA; passed an act against corrupt practises, which was designed against abuses in elections; and appropriated \$1,800,000 for education, \$1,000,000 to retire hospital-building bonds, and \$700,000 for the support of the unemployable poor, through a newly-created board.

Political and Other Events. Advocates of the proposals of Huey Long of Louisiana, to distribute the wealth of the prosperous for the advantage of the poor, sought to gain political control of the State. Former Representative Paul B. Johnson, alleged to have the support of Long, ran for the Democratic nomination for Governor. Hugh L. White and three minor candidates opposed him. White campaigned as an opponent of Longism. The primary election, held early in August, having given Johnson a small plurality, insufficient for nomination, a "runoff" primary was held on August 27. White then obtained a majority of some 12,000 over Johnson. He thus gained the Democratic nomination, which in the absence from the State of any other organized party virtually assured his election.

Three northern counties suffered severely in January from a flood of the Coldwater River, which inundated nearly 100 square miles and drove out or marooned hundreds of families. A Negro was lynched near Slayden on March 12, another, at Wiggins on June 22, two, near Columbus on July 15, and one, near Oxford on September 17. A half-mile stretch of road surfaced with a layer of cotton, overlaid with a mixture of asphalt and fine gravel, was laid in September near Greenville, to test the merit of this type of highway. The Cotton Textile Institute encouraged the test. See **FLOODS**.

Officers. The chief officers of the State, serving in 1935, were: Governor, Sennett Conner; Lieutenant-Governor, Dennis Murphree; Secretary of State, Walker Wood; Attorney-General, Greek L. Rice; Treasurer, Lewis S. May; Auditor, Joseph S. Price; Superintendent of Education, W. F. Bond.

Judiciary. Supreme Court: Chief Justice, Sydney Smith; Associate Justices, W. D. Anderson, James G. McGowen, George H. Ethridge, W. H. Cook, V. A. Griffith.

MISSISSIPPI, UNIVERSITY OF. A coeducational, State institution of higher learning at University, Miss., chartered in 1844. The enrollment for the autumn of 1935 was 1239, while that for the 1935 summer session was 382. There were 70 fac-

ulty members. The library contained approximately 40,000 volumes. The income (appropriation) for the biennium was \$317,000; students' fees amounted to approximately \$200,000. Chancellor, Alfred Benjamin Butts, M.A., Ph.D.

MISSISSIPPI RIVER. See **CANALS**.

MISSOURI. Population. On Apr. 1, 1930 (Fifteenth Census), 3,629,367; July 1, 1934 (latest Federal estimate), 3,678,000; 1920 (Census), 3,404,055. St. Louis (1930) had 821,960 inhabitants; Kansas City, 399,746; Jefferson City, the capital, 21,596.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	3,879,000	73,701,000	\$44,221,000
	1934	4,815,000	26,482,000	25,158,000
Hay (tame) ...	1935	2,280,000	2,677,000*	20,613,000
	1934	2,420,000	1,510,000*	23,707,000
Wheat	1935	1,904,000	24,176,000	20,308,000
	1934	1,522,000	21,281,000	17,876,000
Cotton	1935	307,000	200,000*	11,150,000
	1934	316,000	242,000*	14,941,000
Oats	1935	1,404,000	30,888,000	10,811,000
	1934	1,235,000	13,585,000	6,521,000
Potatoes	1935	54,000	4,212,000	2,738,000
	1934	46,000	1,380,000	1,214,000

* Tons. * Bales.

Mineral Production. The mines' production of lead totaled 90,493 short tons for 1934, as against 84,980 for 1933. The value of the lead mined in the State attained some \$6,700,000 for 1934. Mines in the State produced somewhat less than one-third of all the lead native to the United States that was mined in that year; the State maintained its position as the foremost producer of the domestic supply of lead. The less important recovery of zinc from the ores of the State increased to 7059 tons for 1934, from 5042 for 1933. The combined value of the lead, zinc, and some silver and copper shipped in 1934 from the mines in Missouri was \$7,348,028; for 1933 it was \$6,712,048.

Missouri's production of lime increased in yearly quantity to some 284,000 short tons for 1934, from 230,051 for 1933; in value, to \$1,510,000 (1934) from \$1,121,295 (1933).

Education. The sales tax adding some \$1,500,000 to the State's funds for aid to public schools, the grants of such aid, according to the *Journal* of the National Education Association, increased in 1935 by 40 per cent. Consolidations including over 100 small rural districts were reported.

Charities and Corrections. A Board of Managers of Eleemosynary Institutions held in 1935 a centralized administrative power with regard to the institutional care of sufferers from tuberculosis and from mental disorders. This Board received its authority upon the abolition of the earlier State Board of Charities and Corrections in 1933. Besides doing its institutional duties it functioned as a State commission for the blind and as a State commission for old-age assistance. It also performed the administrative duties as to child welfare, through a Children's Bureau.

The State's authority over its correctional institutions was exercised through a separate Penal Board.

Legislation. The General Assembly met on January 3. To qualify the State for Federal subvention under the Social Security Act (see **UNITED STATES: Congress**) it enacted a system of pensions for the aged. This system allowed pensions at not over \$30 a month for single persons or \$45 for man and wife, to those over 70 years of age who had not

adequate means of support. Recipients must have resided in the State for five of the last previous nine years; they might own property to the value of \$1500 each if single or \$2000 to the married pair. Additional allowance at death, of \$100 for burial, was made.

In order to provide the State's half of the pension payments the State's tax on merchants' sales was amended. Its rate was increased to 1 per cent of each sale. Previously payable by the seller, it was rendered payable by the purchaser to the seller, who must in turn deliver the proceeds to the State. Payment was required, approximately, to the nearest mill. This tax and the pension act both became effective on August 27.

A liquor act was passed, chiefly to render control over saloons effective. It required all holders of licenses permitting sale by the drink of any beverages stronger than 3.2 per cent beer to close at 1:30 A.M. on weekdays and at 12 midnight on Saturdays, and to remain closed all of every Sunday. Authorities were empowered to use search and seizure and to employ nuisance-and-abatement procedure.

Political and Other Events. As the law called on purchasers to pay sales taxes, from August 27, to fractions of a cent, and as the Federal Government had failed to coin the necessary mills, the State resorted to issuing tokens similar, in shape, size, and material, to the caps used on milk bottles; these were marked in denominations of one and of five mills, and were to be receivable in payment of the tax. According to report late in the year the sales tax was proving difficult of collection.

It was not possible to put the pensions for the aged into operation when the act granting them became effective. The failure of Congress to appropriate for the Federal contribution to the payments deprived the State of half the expected money, and slow revenue from the sales tax, as well as other demands on the proceeds, cut down the State's own contribution. Pension boards nominated by the Governor for the several counties were generally unable to act. There resulted disappointment among some 80,000 persons who had hoped for immediate income through the pensions.

The Federal and State expenditure for relieving the need of the destitute unemployed in Missouri cost \$28,927,118 for 1934. Of this the State's own payment of \$2,665,105 and its subdivisions' \$3,079,261 provided about one-fifth. The FERA, declaring that the Legislature had as yet failed to appropriate its proper share toward this expense for 1935, suspended its monthly grant on April 1. The later legislation to raise revenue was followed by renewed Federal grants.

Navigation of the Missouri River between Kansas City and the mouth, a stretch of some 400 miles, was opened for 150-foot barges in April. It had been rendered possible by Federal expenditure of a sum reported as about \$57,000,000 in improving the channel to assure 6 feet of depth at low water. The improvement had begun in 1924. The Federal Government carried on in 1935 a scheme to remove some 11,000 families from their homes in the Missourian Ozark uplands and resettle them in adjacent lowland communities. It took options to purchase their upland holdings for reforestation.

The State Attorney-General delivered in the spring an opinion asserting the right of the State to call outstanding debt for refunding at the then available lower rates of interest, prior to stipulated maturities. This disturbed the cities' credit; St. Louis was unable on May 28 to get bidders for an

issue of \$1,800,000, although earlier in the year it had placed a greater issue at prices to yield the takers less than 3 per cent. See FLOODS.

Officers. The chief officers of the State, serving in 1935, were: Governor, Guy B. Park; Lieutenant-Governor, Frank G. Harris; Secretary of State, Dwight H. Brown; Auditor, Forrest Smith; Treasurer, Richard R. Nacy; Attorney-General, Roy McKittrick; Superintendent of Public Schools, Lloyd W. King.

Judiciary. Supreme Court: Chief Justice, William F. Frank; Associate Justices, J. C. Collet, Ernest S. Gantt, Charles Thomas Hays, George R. Ellison, Ernest M. Tipton, C. A. Leedy, Jr.

MISSOURI, UNIVERSITY OF. A State institution of higher education in Columbia and Rolla, Mo., founded in 1839. The enrollment for all divisions for the first semester of 1935-36 was 4287, of whom 3256 were men and 1031 were women. The total enrollment for the 1935 summer session was 2041. There were 415 faculty members. The endowment amounted to \$2,059,096, while the total income from all sources was \$2,249,288. The libraries contained approximately 350,000 volumes. President, Frederick A. Middlebush, Ph.D.

MIZPAH. See ARCHÆOLOGY.

MOISSI, ALEXANDER. A dramatic actor of the German-Austrian stage, died in Vienna, Mar. 22, 1935. Born at Trieste, Austria, Apr. 2, 1880, of Italian-speaking parentage, he was attracted by the lure of the stage and began by playing small parts in a Bohemian theatre in Vienna. In order to succeed he was told that he would have to learn German, and in three months was able to play in German, the title rôle in *Cyrano de Bergerac*. From 1903 to 1905 he performed at the Landestheater in Prague, where he came to the attention of Max Reinhardt, who brought him to Berlin. In 1904 he appeared at the newly-opened Deutsche Volksbühne, but subsequently returned to Reinhardt's management.

He left the stage during the World War to serve in the German army, and at the close of the War, appeared in plays of Pirandello and Tolstoi in Paris and Geneva. Subsequently he went to Moscow with a Little Theatre Group, and there scored a success. In 1927 he made his New York début under Reinhardt's management, and returned the next season under that of Morris Gest and toured South America. He made a motion picture entitled "The Royal Box," but the venture proved unsuccessful. His death in March, 1935, prevented him from carrying out his intention of playing the rôle of Savonarola in a play of that name at the festival in Florence at the end of April, 1935.

One of the great tragedians of the German stage, in the early days of his career, he was accused of being an emotional actor rather than an intellectual one, but had overcome this by 1914. His voice was both compelling and amazing, and Alexander Woollcott wrote of it that "it is the most extraordinary voice that ever was heard in the theatre—a voice that can cut like a scourge or, at will, sink to a curious tiny whisper, of which the faintest breath can be heard to the innermost reaches of the Cathedral." His greatest success was made in Tolstoi's *The Living Corpse*, the morality play, *Everyman*, and Ibsen's *Ghosts*. Other important rôles in his repertory were those of Romeo, Hamlet, Faust, Orestes, Othello, Marc Antony, and *Cyrano de Bergerac*. Shortly before his death he was admitted to Italian citizenship by the Italian Government.

MOLECULES. See CHEMISTRY.

MOLLUSCA. See Zoölogy.

MOLUCCA ARCHIPELAGO. See NETHERLAND INDIA.

MONACO, mön'a-kō. A principality on the Mediterranean surrounded on its land sides by the French department of Alpes-Maritimes. Area, 370 acres; population (1933), 22,153. Chief towns: Monaco (capital), 2085 inhabitants; La Condamine, 11,787; Monte Carlo, 11,055. The gambling concession at Monte Carlo was the principal source of revenue. The budget estimates for 1933 balanced at 9,348,453 francs (franc averaged \$0.501 for 1933). Ruler in 1935, Prince Louis II.

MONEY. The table on page 455 from the 1935 annual report of the Secretary of the U.S. Treasury shows the distribution of the stock of money in the United States on June 30, 1935, with comparative totals for May 31, 1935, June 30, 1934, Oct. 31, 1920, Mar. 31, 1917, June 30, 1914, and Jan. 1, 1879.

MONGOLIA. A large, vaguely defined region of east central Asia bounded by China proper, Kansu, and Sinkiang on the south, Soviet Siberia on the north, and Manchuria on the east. It is divided politically into Outer Mongolia, an independent Soviet republic under the protection of the Soviet Union; Inner Mongolia, nominally comprising the Chinese provinces of Ningsia, Suiyuan, and Chahar, which in 1935 were partly under Japanese and partly under Mongol autonomous control; and Jehol and parts of Hsingan provinces in Manchoukuo (q.v.).

The area is roughly estimated at 1,875,000 square miles and the population at from 1,000,000 to 3,000,000, mostly Mongols but with an infusion of Chinese and Russians. The Mongols lead a semi-nomadic pastoral life and livestock raising is their main occupation. However Chinese settlers in Inner Mongolia and natives under Russian guidance in the north and northwestern parts of Outer Mongolia have developed agriculture. In the latter area industries for the manufacture of livestock products, equipped with Soviet machinery, have been started on a small scale. The chief products of Mongolia are furs, skins, hides, horns, and wool. The soil is fertile but needs irrigation to be productive. Some gold is mined.

Outer Mongolia. Russian sources estimate the area of Outer Mongolia at 596,177 square miles and the population at 767,000. The capital is Ulan Bator Khoto (Urga), with about 60,000 inhabitants. Trade, largely with the Soviet Union, is a government monopoly. In 1935 Mongolia ranked seventh in importance among the Soviet Union's export markets. All lands, forests, minerals, and marine products are collectively owned and the Mongol princes and Buddhist priests have been deprived of their privileges. Governing powers are vested in a parliament (the Great Huruldan), elected by universal suffrage, and in an executive committee of 30 members (the Little Huruldan). The Little Huruldan elects the President of the republic.

Inner Mongolia. During 1935 Chahar in Inner Mongolia was detached from the control of the Nanking Government through Japanese military action and diplomacy and incorporated in the Japanese-controlled Hopei-Chahar Political Council. The Japanese also extended their influence over the autonomous Mongol government established in 1934 over Mongol territories in Chahar and Suiyuan, with its capital at Pailingmiao.

History. The extension of Japanese control over Chahar and part of Suiyuan Province in Inner Mongolia during 1935 is described in the article on

CHINA under *History*. By the middle of 1935 Japan's penetration into Inner Mongolia and her occupation of Manchuria had completed the encirclement of the eastern and part of the southern boundary of Outer Mongolia. Outer Mongolia occupied a position of great strategic importance in connection with the mounting rivalry between Japan and the Soviet Union. As a Soviet protectorate it guarded the Russian flank. Its control by Japan would enable the Japanese to cut the all-important Trans-Siberian Railway in case of war with the Soviet Union. From their first contact with the Outer Mongolians the Japanese, acting through the Manchoukuoan army, displayed a determination to extend their control over that territory. The troops of Outer Mongolia, supported by the Soviet Government, offered equally determined resistance and commencing in January of 1935 a series of border clashes took place along the Mongolian-Manchurian frontier.

The first of these occurred at Khalkha Miao on the north shore of Lake Buir. The undefined state of the border enabled both sides to claim that they had been attacked on their own territory. Attempts to settle this dispute were obstructed by the Japanese demand that Outer Mongolia be opened up and that Japanese and Manchoukuoan subjects be permitted to travel, reside, and do business there. The Mongolians, fearing that these demands were intended to pave the way for eventual Japanese control, sought to restrict the negotiations to a discussion of the border incidents and the question of delimiting the frontier. This conflict of aims persisted throughout a Manchoukuoan-Mongolian conference which met at Manchuli on the northwestern border of Manchoukuo beginning June 3 and which collapsed in an atmosphere of hostility on November 27.

With Japanese and Russian advisers guiding the policies of the Manchoukuoan and Mongolian delegations, respectively, the conference was in reality an effort by Japan and the Soviet Union to determine how far each was ready to go to insure its possession of Outer Mongolia. The Japanese were reported to have threatened to take Ulan Bator Khoto by force unless Outer Mongolia consented to admit Japanese representatives to three Mongolian cities and formally recognized the government of Manchoukuo. This the Outer Mongolians refused to do, while the Soviet representatives made it plain that their government would support Outer Mongolia in case of a Japanese attack. In December, while Prime Minister Gendun and War Minister Demid of Outer Mongolia were conferring in Moscow with Soviet military and government officials, the Japanese occupied Kalgan on the caravan route from Peiping to Ulan Bator Khoto and serious new clashes occurred between Outer Mongolian and Manchoukuoan troops along the mutual frontier.

See CHINA, JAPAN, MANCHOUKUO, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*. Consult T. A. Bisson, "Outer Mongolia: A New Danger Zone in the Far East," *Foreign Policy Reports*, Nov. 20, 1935.

MONTANA. Population. On Apr. 1, 1930 (Fifteenth Census), 537,606; Jan. 1, 1920 (Census), 548,889. Helena, the capital, 11,803 (1930).

Agriculture. The table on page 456 shows the acreage, production, and value of the principal crops for 1935 and 1934.

Mineral Production. The metal mines produced in 1934 ores containing \$14,393,186 (revised total) in value of recoverable gold, silver, copper,

LOCATION, OWNERSHIP, AND PER CAPITA CIRCULATION OF UNITED STATES MONEY, JUNE 30, 1935
[From Annual Report of the Secretary of the Treasury, 1935]

[illegible]

• Includes money held by the Cuban agency of the Federal Reserve Bank of Atlanta.

¹ Includes money held by the Cuban agency of the Federal Reserve Bank of Atlanta.

c Does not include gold other than that held by the Treasury.

* Includes \$1,800,000,000 exchange stabilization fund. Does not include GOM other than that held by the

* These amounts are not included in the total since the gold or silver held as security against gold and silver certificates and Treasury notes of 1890 is included under gold, standard silver dollars, and silver bullion, respectively.

This total includes \$2,879,855 deposited for the redemption of Federal reserve notes (\$1,321,295 in process of redemption), shares, and silver bullion, respectively.

1 This total includes \$22,679,833 deposited for the redemption of a special certificate notes (a portion of the process of recapitalization).
2 Includes \$12,206,074 lawful money deposited for the redemption of national bank notes (\$29,567,983 in process of redemption, including notes chargeable to the retirement fund), \$1,350 lawful money deposited for the redemption of additional circulation (at May 30, 1908), and \$55,320,546 lawful money deposited as a reserve for postal savings deposits.

• The amount of gold and silver certificates and Treasury notes of 1890 outside of the Treasury should be deducted from this total before combining with total money held in the Treasury

arrive at the stock of money.
(Revised.

NOTES.—Gold certificates are secured dollar for dollar by gold held in the Treasury for their redemption for uses authorized by law; silver certificates are secured dollar for dollar by standard silver dollars held in the Treasury for their redemption (or by silver bullion); United States notes and Treasury notes of 1890 are secured by a gold reserve of \$156,039,431 held in the Treasury for their redemption for uses authorized by law; silver certificates are secured dollar for dollar by silver bullion held in the Treasury for their redemption for uses authorized by law.

standard silver dollars held in the Treasury; Treasury notes of 1890 are also secured dollar for dollar by standard silver dollars held in the Treasury; Federal Reserve notes are secured by a gold reserve of \$100,000,000, Federal Reserve notes are secured by the deposit with Federal Reserve banks of Federal Reserve bank Federal Reserve notes are being canceled and retired on receipt.

Reserve notes are obligations of the United States and a first lien on all the assets of the issuing Federal reserve bank. Federal reserve notes are secured by the deposit with Federal reserve agents of a like amount of gold certificates (gold, previous to Jan. 30, 1934) or of gold certificates and such discounted or purchased paper as is eligible under the terms of the Federal Reserve Act on issue.

the Federal Reserve Act, or (from Feb. 27, 1932, until Mar. 3, 1937) of direct obligations of the United States if so authorized by a majority vote of the Federal Reserve Board. Federal reserve banks must maintain a reserve in gold certificates (gold, previous to Jan. 30, 1934) of at least 40 per cent, including the redemption fund which must be deposited with

The United States Treasury must maintain a reserve in gold certificates (gold) previous to January 1, 1907, or at least to per centum, including such certificates as are deposited with the Federal Reserve banks except where law-
The United States Treasury must maintain a reserve in gold certificates (gold) previous to January 1, 1907, or at least to per centum, including such certificates as are deposited with the Federal Reserve banks except where law-

except where lawful money has been deposited with the Treasurer of the United States for their retirement. National bank notes are secured by United States bonds except where lawful money has been deposited with the Treasurer of the United States for their retirement. A 5 per cent fund is maintained in lawful money with the Treasurer of the United States for their retirement.

for the redemption of national bank notes and Federal reserve bank notes.

Crop	Year	Acreage	Prod. Bu.	Value
Wheat	1935	3,441,000	35,017,000	\$33,881,000
	1934	2,572,000	28,174,000	24,265,000
Hay (tame) ...	1935	1,481,000	1,599,000*	13,911,000
	1934	1,425,000	1,512,000*	17,086,000
Sugar beets	1935	51,000	574,000*	.....
	1934	64,000	786,000*	4,095,000
Oats	1935	376,000	8,272,000	3,061,000
	1934	306,000	7,344,000	3,305,000
Potatoes	1935	23,000	1,955,000	1,466,000
	1934	23,000	1,610,000	1,208,000
Corn	1935	200,000	1,800,000	1,260,000
	1934	133,000	665,000	625,000
Barley	1935	184,000	3,312,000	1,524,000
	1934	123,000	2,214,000	1,306,000

* Tons.

lead, and zinc. To this total, 97,822 oz. of gold contributed \$3,418,879; 3,958,000 oz. of silver, \$2,558,707; 63,250,000 lb. of copper, \$5,060,000; 61,000,000 lb. of zinc, \$2,623,000; and 19,800,000 lb. of lead, \$732,600.

The coal mines' yearly production rose somewhat sharply to the total of some 2,990,000 tons for 1935, from 2,565,702 for 1934. The output of petroleum increased to 3,786,000 bbl. for 1934, from 2,122,000 for 1933; it thus attained the highest yearly total subsequent to 1929 and exceeded any other State in its proportionate increase over the total of 1933. The increase in the production of petroleum in 1934 was due mainly to new production in the Cut Bank field, which was much extended. The natural-gas wells produced and distributed, in 1934, 15,020,613 M cu. ft. of natural gas; of the total, about 11,400,000 M cu. ft. went to domestic users in Montana and North and South Dakota, and about 3,600,000 M to smelters, a sugar-beet refinery, and other industrial consumers.

Education. Inhabitants from 6 to 21 years old were considered to comprise the population of schoolgoing age; this group was reported to number 159,789. Enrollments in the public schools in the academic year 1934-35 totaled 116,728. Of these, 83,995 were in common schools or elementary grades, and 32,678 were in high schools. The expenditures of the year for public-school education throughout the State amounted to \$10,990,084.

A legislative measure to bring about the greater concentration of the public-school system, into some 235 administrative units instead of the actual 2300, failed to be enacted but seemed likely to get further consideration at another legislative session. Classes for the education of adults continued in 1935, supported by Federal grants through the FERA.

Charities and Corrections. The central administrative powers over the State's institutions for the care and custody of persons, under the laws in effect in 1935, rested in a State Board of Charities. These powers were supervisory and advisory. The Board was composed of three members, appointed by the Governor for terms of six years each. A Bureau of Child Protection (Maggie Smith Hathaway, Secretary) performed extensive duties in the protection of minors.

Legislation. A system of pensions was enacted for the support of elderly persons without sufficient income; by this act the State expected to qualify for Federal subvention to State pensions of this character. The marriage law was altered, to require applicants for a marriage license to present medical certificates of fitness, based on physical examination; the tubercular and sufferers from other communicable or infectious diseases were disqualified from marriage. An individual drinking permit, obtainable for \$2, was required by act to be presented by persons seeking to buy liquor at the

State dispensing shops. The Legislature considered the proposal to disestablish counties having less than \$5,000,000 apiece in taxable property and to merge their territory in other counties.

Political and Other Events. Helena and a wide adjacent area suffered a destructive earthquake on the night of October 18, which killed two men and destroyed or damaged buildings in the city to the sum of nearly \$3,000,000. The Algeria Shrine Temple, reported to have cost approximately \$1,000,000, a new \$250,000 high school, and the county hospital were among the buildings most damaged. The earthquake was one of a series that started some six days earlier and continued, sometimes with severity, for some days after the main shock. See EARTHQUAKES.

The marriage law enacted by the year's session of the Legislature produced something of the nature of a marrying strike. The number of weddings in the State fell sharply. Petitions for a suspension of the law and a referendum were filed from county after county. Upon petition from 29 counties it was expected that the law would be suspended to await the result of a referendum to be held in November.

The Federal Treasury, which had a dispute with Montana as to whether the State's liquor monopoly owed a Federal income tax, made a ruling in March exempting the monopoly. This set a precedent for the cases of 11 other States that had engaged in the liquor traffic.

Officers. The chief officers of the State, serving in 1935, were: Acting Governor, F. H. Cooney; Attorney-General, Raymond T. Nagle; Secretary of State, Sam W. Mitchell; Treasurer, James J. Brett; Auditor, John J. Holmes; Superintendent of Public Instruction, Elizabeth Ireland.

Judiciary. Supreme Court: Chief Justice, W. B. Sands; Associate Justices, John A. Matthews, C. F. Morris, Ralph J. Anderson, Samuel V. Stewart.

MONTANA, STATE UNIVERSITY OF. A State institution for the higher education of men and women at Missoula, Mont., founded in 1893. The enrollment for the autumn of 1935 was 1920. In the 1935 summer session 852 students were registered. The faculty had 98 members. The income for the year amounted to \$425,000. There were about 225,000 volumes in the library, including government documents. Acting President, Fred C. Scheuch.

MONTE CARLO. See MONACO.

MONTSEERRAT. See LEEWARD ISLANDS.

MOONEY, THOMAS. See LAW; CALIFORNIA

MORAVIA AND SILESIA. See CZECHOSLOVAKIA.

MORAVIANS. A religious denomination, formed in Bohemia in 1457 under the leadership of John Huss and Jerome of Prague. In 1741 Moravians, settling at Bethlehem, Pa., founded the first Moravian church in the United States, called also the Unitas Fratrum or United Brethren. There were later established the Evangelical Union of Bohemian and Moravian Brethren in North America and the Independent Bohemian and Moravian Brethren Churches. The doctrine of the denomination is evangelical, and in its polity it follows a modification of the episcopacy.

Unitas Fratrum. There are two coördinate provinces of this, the largest branch of the Moravian Church in the United States. The Northern Province, with headquarters in Bethlehem, Pa., has a provincial synod which meets every fifth year. The provincial synod of the Southern Province, whose headquarters are in Winston-Salem, N. C., meets every third year. On Jan. 1, 1935, the provin-

cial elders' conferences of these provinces reported 152 churches, 169 ministers, 26,466 communicant members (although the actual membership is estimated at 36,312), and 146 Sunday schools with 24,413 pupils. The Society of the United Brethren for Propagating the Gospel among the Heathen carried on its work in Alaska, Nicaragua, Honduras, the West Indies, Labrador, Surinam, the Himalayas, Unyamwesi, Central Africa, and South Africa, reporting in 1934 a missionary membership of 148,653. The denomination also maintained the following educational institutions: Linden Hall at Lititz, Pa.; Moravian College and Theological Seminary and Moravian Seminary and College for Women at Bethlehem, Pa.; and Salem Academy and College for Women at Winston-Salem, N. C. The official periodical is *The Moravian*, a weekly. The Rev. S. H. Gapp was president of the provincial elders' conference of the Northern Province in 1935. The provincial elders' conference of the Southern Province was headed by the Rt. Rev. J. Kenneth Pfohl.

MORGAN MINIATURES. See ART SALES.

MOROCCO. A region of northwest Africa, divided administratively into (1) the French Zone (area, 162,162 square miles; population, 1934 estimate, 5,500,000), including about 85 per cent of the total area and population; (2) the Spanish Zone (area, 13,125 square miles; estimated population in 1933, 720,273, including about 34,000 Europeans and 13,000 Jews); and (3) Tangier (q.v.). Of the French Zone population, about 5,067,743 were Moslems. The chief cities, with their 1931 populations, were: Marrakech, 195,122; Casablanca, 163,108; Fez, 112,463; Meknès, 57,004; and Rabat, the political capital, 55,348. The principal cities in the Spanish Zone are Tetuan, with 48,300 inhabitants in 1933; Alcazar, 35,600; Larache, 32,000; Melilla, 62,835; and Ceuta, 39,870.

In the French Zone there were, in 1933, 28,057 pupils in European primary schools, 15,028 in Jewish schools, and 12,782 in Moslem schools, besides 4424 in private institutions. In secondary schools 8200 were enrolled. About 95 per cent of the Moslems, 21 per cent of the Jews, and 10 per cent of the Europeans were illiterate. There is a French University at Rabat and Moslem universities at Rabat and Fez, with about 1000 students in all. The following statistics refer to the French Zone, unless otherwise specified.

Production. Agriculture and stock raising are the principal occupations. About 8,648,500 acres were under crops in 1933. Livestock in 1934 included 1,965,000 cattle, 8,086,000 sheep, 4,704,000 goats, 94,000 swine, 218,000 horses, 121,000 mules, 694,000 asses, and 154,000 camels. Wool production in 1933 was 12,200 metric tons. The 1934 crop yields (in thousands of units) were: Wheat, 38,918 bu.; barley, 49,826 bu.; oats, 1894 bu.; corn, 9688 bu.; linseed, 326 bu.; wine, 15,322 gal.; olive oil, 3332 gal. The estimated value of all agricultural production in 1934 was 2,293,000,000 francs. Production of phosphate, the principal mineral, was 1,286,796 metric tons in 1934.

In the Spanish Zone the same crops are raised as in the French Zone. Tunny fishing and livestock raising are important industries. Iron ore production in the Melilla district was 388,000 metric tons in 1933.

Foreign Trade. Imports of the French Zone in 1934 were valued at 1,319,700,000 francs (1,532,400,000 in 1933) and exports totaled 667,400,000 francs (600,200,000 in 1933). Cereals, eggs, fish, and vegetables were the chief exports; sugar, gaso-

line, tea, cotton goods, and automobiles the principal imports. France in 1934 supplied 42.9 per cent of the imports and purchased 50.3 per cent of the exports. Imports and exports of the Spanish Zone in 1934 were about 5,500,000 and 900,000 old U.S. gold dollars, respectively. In 1933 they were 76,018,506 and 14,030,892 Spanish pesetas, respectively.

Finance. Budget estimates for 1934 placed revenues at 1,418,549,885 francs and expenditures at 1,418,167,585 francs. The budget of the Spanish Zone for 1933 balanced at 50,271,261 pesetas, the receipts including a subvention of 25,872,725 pesetas from the Spanish Treasury. The public debt of French Morocco totaled 1,750,210,000 francs on Dec. 31, 1931.

Communications. In 1934 the French Zone had 1195 miles of railway lines, about 2342 miles of main highways (1381 miles of secondary roads), and air lines linking Casablanca, Tangier, and Rabat with France. In 1934 a total of 3800 vessels of 5,713,235 tons entered the French Zone ports, of which Casablanca is the most important. The Spanish Zone had about 72 miles of railway line besides a section of the Tangier-Fez railway. Highways extended about 65 miles.

Government. The Sultan of Morocco, who resides in the French Zone, usually at Rabat, exercises nominal executive authority, but his acts are subject to the veto of the French Resident-General. Sultan in 1935, Sidi Mohammed. French Resident-General, M. Henri Ponsot (appointed July 13, 1933). The Spanish Zone is administered by a Spanish high commissioner residing at Tetuan. Nominal authority is vested in a Khalifa, chosen by the Sultan of Morocco from a list of two candidates selected by the Spanish government. Khalifa in 1935, Sidi Muley Hassan Ben el Mehedi. Spanish High Commissioner, D. Manuel Rico Avello (appointed Jan. 23, 1934).

MOROS. See PHILIPPINES.

MORPHOLOGY. See BOTANY.

MORRIS, EDWARD PATRICK, FIRST BARON, LORD. A Newfoundland lawyer and statesman, died in London, England, Oct. 24, 1935. Born in St. John's, Newfoundland, May 8, 1858, he was educated at St. Bonaventura's College, St. John's, and the University of Ottawa. Admitted as a solicitor of the Supreme Court in 1884, he was called to the bar in 1885. In the same year, he entered politics as a Liberal member of the Legislature, and served until 1919. He was a member of the cabinet of Sir William Whiteway in 1889, and was acting attorney general for Newfoundland (1890-95). In 1898 he broke away from the Liberal Party over the Reid Railway contract and was instrumental in the carrying of that measure. He then became associated with the Independent Liberal Party (1898-1900) and the People's Party (1908). From 1902 to 1907 he was Attorney General and Minister of Justice in the cabinet of Sir Robert Bond.

Sir Edward was elected Premier of Newfoundland in 1909, and was returned to office in the general election of 1913, which hinged chiefly on the issue of the ministerial policy of rapid railway extension. He held this office until 1919, and during his administration great changes took place in the social and economic condition of the country, Newfoundland becoming one of the most prosperous and progressive of the British colonies.

In addition to these activities, Sir Edward served as a delegate to Ottawa to discuss terms concerning the entry of Newfoundland into the Dominion of Canada (1895); a delegate to the Colonial Of-

fice (1897-98); a delegate to the Colonial Office on the French Shore question (1901), for which service he was knighted in 1904; Newfoundland representative at the Imperial Defence Council (1909); counsel for the British Government in the North Atlantic Fisheries Dispute at The Hague (1910); delegate to the Imperial Conference and Coronation (1911); Privy Councillor (1911); member Imperial War Conference (1917); and member, British War Cabinet (1916-17).

After the World War, he took up his residence in England, and was vice chairman of the Imperial Mineral Resources Bureau since its founding. He was raised to the peerage in 1918, and was a Knight Commander of St. Michael and St. George (1913). Besides honorary degrees from the universities of Oxford, Cambridge, Glasgow, and Edinburgh, he received the Freedom of the City of Edinburgh, Manchester, Glasgow, and London. He edited *Newfoundland Law Reports, 1800-1900*, known as Morris' Reports.

MOSQUITO CONTROL. See ENTOMOLOGY, ECONOMIC.

MOTHS. See ENTOMOLOGY, ECONOMIC.

MOTION PICTURES. United States. Perhaps the most important cinema event of 1935 was the manufacture in Hollywood of a film called *The Informer*. It has frequently been noted that the American screen, which is famous for its technical excellence, turns out a sizable succession of lively and entertaining photoplays, but rarely achieves anything that belongs in the domain of distinguished artistic achievement. In *The Informer*, a grim tragedy of the Irish Revolution adapted from the novel by Liam O'Flaherty, a picture was produced which definitely belonged among the finest of all cinema works, whether silent or audible, and which was regarded on all sides as standing among the great dramas of recent years. Done essentially in motion picture terms and without any attempt to make it a photographed stage play, *The Informer* was, among other things, a splendid example of the screen's ability to capture an atmospheric mood and maintain it with honesty and completeness. The direction of John Ford, the adaptation of Dudley Nichols, and the acting of an able cast, headed by Victor McLaglen in the title rôle, resulted in a photoplay that brought honor to the entire American motion picture industry.

The cinema of 1935 showed a considerable interest in the classics, and the works of Shakespeare and Dickens in particular. An elaborate production of *A Midsummer Night's Dream*, directed on a rather heavy-handed scale by Max Reinhardt, with James Cagney, Joe E. Brown, Jean Muir, Anita Louise, and Dick Powell in some of the leading rôles, was presented amid much critical and popular difference of opinion. It contained much visual beauty, a splendid use of the Mendelssohn score, and excellent playing in several of the parts, chiefly among the comedians, but on the whole the picture was not successful enough to reveal vast potentialities for Shakespeare in the cinema. In fact, Dickens proved a more successful screen writer. *David Copperfield*, with Freddie Bartholomew and Frank Lawton sharing the leading rôle, was a tremendously popular and artistic success, and so was *A Tale of Two Cities*, with Ronald Colman as the tragic Sydney Carton. *Great Expectations* and *The Mystery of Edwin Drood* were less successful, as, indeed, were the English-made versions of *The Old Curiosity Shop* and *A Christmas Carol* (known in the films as *Scrooge*). Hollywood once more revealed its vast

enthusiasm for the glories of the British Empire. One of the best pictures of the year was *Lives of a Bengal Lancer*, which was suggested by the well-known Yeats-Brown autobiography, but did not bother with that work's Indian mysticism. It was an enthusiastic, romantic, and exciting account of the glories of the White Man's Burden as represented by the heroism of the British troops along India's northwestern frontier. Done in a manner that combined the excitement of Kipling and the Rover Boys, it proved to be an enormously effective example of screen melodrama at its best. *Mutiny on the Bounty*, a brilliant sea drama, which dramatized the story of the famous rebellion in the English Navy in the later days of the 18th century, succeeded in whitewashing the British Admiralty by blaming the cruelties suffered by the mariners exclusively on the evil Captain Bligh. Thus it became a heroic saga of the heroism of English sailors, as well as an exceptionally striking motion picture. The performance of Charles Laughton as the sadistic Captain Bligh played a great part in the film's success.

Musical pictures became highly popular again. These works were of two kinds. The first usually starred Fred Astaire and Ginger Rogers and were of the light, frivolous, popular sort, with Mr. Astaire's dancing proving a particularly attractive feature. *Top Hat*, with a gay musical score by Irving Berlin, was the greatest success in this field, although the Astaire-Rogers *Roberta* was also an important hit of the season. The second group was brought into favor by the success of Grace Moore, the opera singer, and seemed in great part based on Hollywood's determination to provide cinema audiences with a sound musical education. In all of these films, the plot gave evidence of being chiefly devised to give the star a proper number of opportunities to sing some of the more popular and showy arias from grand opera. Lily Pons, Lawrence Tibbett, and Nino Martini were among the successful stars in this field. The popular singing-and-acting team of Jeanette MacDonald and Nelson Eddy played a great part in the success of a handsome and admirably staged production of Victor Herbert's *Naughty Marietta*. It was pointed out that the film provided Herbert with the sort of satisfying production that he had never been honored with on the stage during his lifetime.

Color photography came to the fore again in 1935, when a spectacular production of *Becky Sharp* was presented with Miriam Hopkins in the title rôle, with the sets by Robert Edmond Jones and the direction by Rouben Mamoulian. Although the color was attractively and dramatically managed, the story itself was not equally effective and it was thought in some quarters that the preoccupation with color slowed down the pace and the dramatic impact of the narrative. At least the film was not regarded as successful enough to warrant a rush of the producers to the process. The most popular and effective use of color was in the Walt Disney cartoon comedies. Already *The Silly Symphonies* had been done in variegated hues, but during the year Mr. Disney decided that even Mickey Mouse should appear in his natural colors. See PHOTOGRAPHY.

The screen's concern with current social ideas was intermittent, and when the pictures did go in for a treatment of such controversial topics they seemed to veer between a sort of milk-and-water liberalism and a jingoistic red-baiting. The most effective social film was *Black Fury*, which dealt with a strike in the coal fields. It attempted val-



"MUTINY ON THE BOUNTY"

Charles Laughton as *Captain Bligh* and Clark Gable as *Fletcher Christian*, the leader of the mutineers

"THE INFORMER"

Victor McLaglen as "*Gypso*" Nolan, beside a poster of his pal, played by Wallace Ford

MOTION PICTURES



"DAVID COPPERFIELD"
W C Fields as *Micawber* and Freddie Bartholomew as *David*



"THE LIVES OF A BENGAL LANCER"
Franchot Tone, Richard Cromwell, and Gary Cooper

iantly to please both capital and labor and suffered the usual fate of making enemies on both sides. It attempted a childish simplification of the causes of labor unrest, with the result that it completely convinced nobody. But it was a powerful and dramatic motion picture, for all of its faults, and when it got over its interest in the causes of labor conflict and presented its straightforward account of the history of a strike it was extremely effective. Of the anti-red assaults, the best known was *Red Salute*, which denounced the radical movement among college students but did it so ineffectively that it was successful neither as propaganda nor entertainment.

One of the innovations of the year was *The March of Time*, which was a combination of news reel, magazine story, and editorial commentary. Issued once a month, *The March of Time* attempted with considerable success to dramatize, with actual and fabricated scenes, various trends and movements in the news, from the invasion of Ethiopia and the French Fascist movement to conditions in the CCC camps and the Townsend plan. Since it was frankly editorial in its dramatization of the news, this new screen magazine was accused of being pro-Fascist, chauvinist, and, even, upon rare occasions, of being radical in its sympathies, but it continued to present effective accounts of controversial topical matters.

The attraction of the child stars continued unabated. Little Shirley Temple remained the most popular player in the cinema and every film company seemed determined to find a rival for her. None of the other baby players achieved anything like her success, although in the Temple film called *Bright Eyes*, another child, Jane Withers, who played the infant villainess of the story and passed her time being mean to America's current sweetheart, attracted almost more attention than the star. In later films there was an attempt to make young Miss Withers a sympathetic character, which so far has proved but moderately successful. In a picture called *O'Shaughnessy's Boy*, it was discovered that Jackie Cooper, child star of several years ago, had grown so much that a boy had to be found to double for him in the early episodes. Of the new boy actors, the most notable is the English Freddie Bartholomew, who made his cinema debut in *David Copperfield*.

The death of Will Rogers (q.v.) was regarded as the greatest film tragedy of the year. At the time of his death two of the Rogers pictures had not been released. They were *Steamboat 'Round the Bend* and *In Old Kentucky*. There was some slight debate as to whether they should be presented to the public, but the answer was a strong affirmative and the pictures proved highly successful at the box office.

Among the American films, not already noted, which were released during the year were *Ruggles of Red Gap*, *Ah, Wilderness*, *Clive of India*, *One More Spring*, *Sequoia*, *The Whole Town's Talking*, *The Wedding Night*, *Private Worlds*, *Les Misérables*, *China Seas*, *Alice Adams*, *Diamond Jim*, *The Dark Angel*, *She Married Her Boss*, *Mary Burns*, *Fugitive*, *So Red the Rose*, *Show Them No Mercy*, *Annie Oakley*, *Captain Blood*, *The Three Musketeers*, *The Scoundrel*, and *Anna Karenina*.

Among the prominent players of the year were Greta Garbo, Charles Laughton, Ronald Colman, Jean Harlow, Jean Muir, James Cagney, Merle Oberon, Janet Gaynor, Paul Muni, Charles Boyer, Robert Donat, Claudette Colbert, Shirley Temple,

Jane Withers, Freddie Bartholomew, Frances Dee, Frances Langford, Henry Fonda, Joan Crawford, Miriam Hopkins, Edward G. Robinson, Katharine Hepburn, Edward Arnold, Basil Rathbone, Claire Dodd, Victor McLaglen, Margot Grahame, Margaret Sullavan, Sylvia Sydney, Cecilia Parker, Errol Flynn, Rosalind Russell, and Jean Arthur.

France. The French film industry, in 1935, suffered a great loss when René Clair, its most distinguished director, deserted it temporarily to make pictures in England, but nevertheless it presented two greatly admired films in *La Maternelle* and *Crime et Chatiment*. The former revealed some of the best and most natural child actors ever seen on the screen.

Germany. The German cinema remained unstimulating, with the exception of a rather powerful film starring Emil Jannings, which used the story of Frederick the Great and his father for the purpose of presenting a Nazi parable of history, duty, and book-burning. The picture was called in America *The Making of a King*.

Great Britain. The year 1935 was marked by continued success of the British effort to invade the international cinema market. More and more British films were successful in the United States and more Hollywood film players were called to London to appear in films manufactured there. The most popular English photoplays shown in this country during the year were *The Scarlet Pimpernel*, *The Man Who Knew Too Much*, and *The 39 Steps*. The British were still inclined to be lethargic in their film story-telling, but their pictures revealed an increasing sense of the value of pace and vitality in the cinema.

U.S.S.R. The film studios of the Soviet Union, which had shown signs of being in a definite slump, sent four interesting motion pictures to America during 1935. *Chapayev* was an exciting military melodrama, which contained both heroism and humor. Both in it and in *Peasants*, an account of the struggle for collectivization in agriculture, the qualities, certainly not always found in the Soviet cinema, of rich comedy and even of a trace of compassion for the hated "class enemy" were to be discovered. *The Youth of Maxim* was the first part of what was planned as a trilogy and dealt with the unsuccessful revolution of 1905. Best of all was *The New Gulliver*, in which one live actor and several thousand remarkable puppets appeared in a humorous and richly imaginative satire that used Dean Swift as a springboard for its hearty comedy.

Awards. The newly-organized New York Film Critics voted *The Informer*, directed by John Ford, the best picture of the year, and awarded its gold medal to Cliff Reid, the producer. Charles Laughton was voted the best male performer for his work in both *Ruggles of Red Gap* and *Mutiny on the Bounty*, and Greta Garbo was selected as the best female performer for her work in *Anna Karenina*.

The annual awards of the Academy of Motion Picture Arts and Sciences went to Victor McLaglen for his work in *The Informer* and Bette Davis for her performance in *Dangerous*. *Mutiny on the Bounty* was judged the best film of the year.

The Institute of Amateur Cinematographs (Great Britain) awarded its annual gold medal to Alexander Korda for his direction of *Sanders of the River*.

MOTORBOATING. *El Lagarto*, George Reis's combination of a 12-year-old hull and an 11-year-old engine, was the marvel of the 1935 motorboating campaign, winning a third consecutive leg on the coveted Gold Cup, the most prized trophy

in the sport, and later in the year shattering all straightaway records for her class. Believed ticketed for the junk pile, because of the changes in the rules which permitted Gold Cup boats to be driven by 732-cubic inch piston displacement engines or by 625-inch motors, *El Lagarto* never ran better nor faster than in 1935 with her theoretically obsolescent equipment. Defending the Gold Cup in late July at Lake George, the *El Lagarto* leaped to an easy victory and two months later was officially timed at 72.727 miles an hour, 10 miles better than the standard, for a Gold Cup hydroplane class record.

A week later Herbert Mendelsohn's *Notre Dame*, the only new boat built for the class in a year of transition from old rules to the removal of virtually all restrictions, averaged 76.080 miles an hour in two dashes over a mile straightaway. *Notre Dame* was shoved by a super-charged 24 cylinder motor, and *El Lagarto* did not possess a supercharger. *El Lagarto* did not defend the President's Cup at Washington and the award went to *Notre Dame*. Victor Kliesrath's *Hotsy Totsy II* led a small fleet of Gold Cup craft for the Detroit Development Trophy, a race also missed by *El Lagarto*.

The big boats were more or less static in the year, the change in the rules discouraging to some extent the building. But the lack of activity in the big boat class was offset by the sudden interest in the 16-foot, 225-cubic inch hydroplanes. This class grew from 13 boats to 40 in the summer and Dr. Cecil Bagley's *Wilmer III* won the national title and had the best record in the class.

In the outboard field three veteran drivers, two of them amateurs, stood out. Fred Jacoby won the gruelling Albany-to-New York marathon under adverse conditions and rolled up a record total through the summer in his successful quest for the Townsend Medal, emblematic of the American outboard high-point championship. Lewis G. Carlisle repeated major triumphs in the Philadelphia Sir Thomas Lipton and Chicago Hearst Gold Cup events and also took the General Dawes Trophy at Marietta, O., and gained a pair of national titles at Tulsa, Okla. Another amateur, Sam Crooks, of Rumson, N. J., won his second leg on the national intercollegiate championship in leading Rutgers University to runner-up position to Yale in the team competition. He led a big field in the Delaware River marathon—Trenton to Philadelphia—and outscored all other amateurs in sanctioned races to win the Col. E. H. R. Green Trophy for the second time.

At the start of the year George Coleman, Jr., of Miami, Oklahoma, was holder of the speed mark for outboard racing at 61.75 miles an hour but midway through 1935, Jean Dupuy, a Frenchman, raised the mark to 65.21 at Paris. Coleman worked over his motor all summer and late in the year, at Lake Spavinaw, shattered Dupuy's mark, and set a new one of 69.383 miles an hour.

MOTOR CARRIER ACT. See UNITED STATES under Congress.

MOUNTAIN CLIMBING. See EXPLORATION.

MOUNT HOLYOKE COLLEGE. An institution for the higher education of women at South Hadley, Mass., founded in 1837. The registration for the autumn session of 1935 was 988 in residence, 25 attending Mount Holyoke College (freshman year) in Hartford, Conn. and three juniors in France and two in Germany. The faculty numbered 128. The endowment funds amounted to

\$4,733,278.05, and the income for the preceding year was \$1,154,489.48. The total amount of gifts and bequests during the year 1934-35 was \$547,949.80.

There were 140,000 volumes in the library, a large addition to which was constructed during 1934-35. President, Mary Emma Woolley, Litt.D., L.H.D., LL.D.

MOZAMBIQUE (PORTUGUESE EAST AFRICA). A Portuguese colony in East Africa. Area, 297,657 sq. miles; population (1934), 4,028,746. There were two administrative units (1) the government controlled Province of Mozambique (245,776 sq. m.) consisting of seven districts, and (2) the territory of Manica and Sofala (51,881 sq. m.) administered by the Mozambique Company under royal charter. Lourenço Marques, the capital of the Province, had 42,779 inhabitants in 1931; Beira, capital of Manica and Sofala, 23,694.

Production and Trade. Sugar, maize, cotton, sisal, copra, gold, and silver were the chief products. In 1933, imports were valued at 12,582,789 gold escudos; exports, 8,385,006 gold escudos. The United States, during 1935, supplied \$5,060,602 of the imports and received \$1,657,303 of the exports.

Government. A decree, of May 9, 1935, provided that future fiscal years should coincide with the calendar year and approved the budget expenditure of 327,853,805 paper escudos for the 18 months ending Dec. 31, 1936 (escudo equaled \$0.0449 on June 13, 1935). The Province of Mozambique was administered by a governor-general assisted by a governor in each of the seven districts. A governor represented the Mozambique Company in Manica and Sofala.

MUNICIPAL GOVERNMENT. Adoptions of the council-manager plan of government during the year brought the roster up to about 465, including a few counties. The total adoptions for the year were about 15 compared with 10 in 1934 and only 7 in 1933. The largest cities added to the list were Trenton, N. J., and Saginaw, Mich., with populations in 1930 of 123,356 and 80,715. The adoption at Trenton was the seventh in that State, long a stronghold of the commission plan; so strong that repeated attempts to get a general enabling act for the plan were defeated. The vote at Trenton stood 18,623 to 11,299, with all but one ward in favor of adoption and a tie vote in that. A new council of seven, in place of the five old commissioners, was elected on April 16, and soon afterwards appointed a city manager. Third in size of the new council-manager cities is Wheeling, W. Va. (61,659 population in 1930). It abandoned an inferior manager plan in 1929. Under the new plan the council is elected by proportional representation. Other city adoptions reported are: Ashland, Eastport, Oakland, and Rumford, Me.; Troy and North Troy, Vt.; West Hartford, Conn.; Grayling and Rockford, Mich.; Huron, S. Dak.; and Pittsburg, Calif. Five cities defeated the plan: Syracuse, N. Y., by the large majority of 31,318 to 18,441; Saratoga Springs, N. Y., and Beacon, N. Y. (the latter a second defeat); Raleigh, N. C. (heavy rain, with only 6250 voting out of a possible 15,000); and Braintree, Mass. (a "hybrid charter"). Of three attempts to abandon the council-manager plan two failed and one succeeded: Toledo, Ohio, voted on May 28, by 27,264 to 18,338, to retain a proportional-representation and manager charter adopted as recently as November, 1934, by a majority of 5225. A sixth attempt to abandon the council-manager plan at Kenosha, Wis., was defeated on April 1, by a majority of 2109 votes. The single abandonment was at San Rafael, Calif., where a

newly elected council rescinded a manager ordinance adopted in 1915.

County-Manager Adoptions and Defeats. Of four counties voting on the county-manager plan two voted yes and two no. Cuyahoga County, Ohio, which, including Cleveland, had a population of 1,201,455 in 1930, cast 166,181 to 148,306, for a charter providing for the election by proportional representation of eight councilmen and by preferential choice for a president, the council to take office on Jan. 1, 1936, and to appoint a manager. Litigation is in prospect, the county prosecutor holding that for adoption of the charter a majority of all the municipalities in the county was required. Cuyahoga County is the first county in Ohio to cast a vote in favor of the council-manager plan. Two other Ohio counties voting on the plan November 5 defeated it badly: Hamilton County (which includes Cincinnati), 103,946 to 60,849; Lucas County (including Toledo), 40,252 to 24,245.

County Consolidation. Legislation authorizing consolidation of two or more counties on a majority vote was passed by Wisconsin. A proposal to consolidate Duval County and the City of Jacksonville, Fla., which it is said would have made Jacksonville the largest city territorially in the world, was defeated on June 18. Only about 60 per cent of the legal voters went to the poles.

Bibliography. Salter, *Boss Rule*, (New York); Lepawsky, *Home Rule for Metropolitan Chicago*, (Chicago); Phillips, *Operation of the Council-Manager Plan of Government in Oklahoma Cities*, (Philadelphia); Ridley and Nolting, *The Municipal Year Book*, (Chicago, 1935).

MUNICIPAL OWNERSHIP. Litigation in the Federal Courts brought by electric utility corporations to prevent the Tennessee Valley Authority (TVA) from assisting municipalities in owning or operating electric light and power systems was a feature of the year. The first innings were won by the utilities in a district court but this decision was reversed by a circuit court of appeals. The suit was brought by the Alabama Power Co. to enjoin 14 cities of northern Alabama from borrowing money from the TVA for the construction of electric distribution systems. Judge W. I. Grubb of the Federal district court at Birmingham, Ala., granted a temporary injunction on February 9, which he made permanent on February 22. The Court of Appeals of the Fifth Circuit, at New Orleans, unanimously reversed Judge Grubb on July 17. In view of possible adverse action by the Supreme Court in this and other cases on final appeal Congress passed and on August 31 the president signed a bill amending the TVA act of 1933. Besides authorizing the TVA to sell surplus electric current the amendment empowers it to lend money to States, counties, and minor governmental units with which to acquire electric transmission and distribution lines. Meanwhile litigation to prevent another Federal agency from aiding municipal ownership of light and power plants was brought in the West and Southwest. The Kansas Gas & Electric Co. sought an injunction to prevent the city of Independence, Kan., from building an electric light and power plant with funds supplied by the Public Works Administration (PWA). On August 20 the Tenth Circuit Court of Appeals, sitting at Denver, Col., upheld a decision of a district Federal Judge denying the injunction. The appeals court, however, approved an injunction against issuing revenue bonds to pay for the plant and against diverting water works funds for the purpose. On the same date the first case of this general character reached the U.S. Su-

preme Court in an action brought by the Kansas Utilities Co. to stop the PWA from helping the city of Burlington, Kan., finance an electric plant. To facilitate an appeal to a higher court the Supreme Court of the District of Columbia, on October 14, dismissed three cases brought by utility companies to block PWA loans for electric plant construction. This action sent the three cases to the District Court of Appeals where a similar suit involving the town of Hominy, Okla., had already been argued. About the same time a like suit before the same court was in progress to prevent a PWA loan for an electric plant at Yorktown, Texas.

Gasworks, Water Works, and Subways. One of the privately owned gasworks of Indianapolis was bought by the city late in the year. A similar purchase of water works took place at Salem, Ore. The city of Newark, N. J., completed a subway in the bed of a disused canal and turned it over to a company for rapid transit service. New York City came nearer to its goal for a unified municipally owned and operated rapid-transit system. After long-continued negotiations a tentative plan was adopted in November under which the city would pay \$417,000,000 net for the privately owned subway and elevated lines within Greater New York. These would be united with the city's independently owned and operated subway. The whole would be turned over for operation to the Board of Transit Control. The present single five-cent fare would be continued, subject to change by the Board of Estimate and Apportionment.

Votes for and Against Municipal Electric Plants. Large majorities in favor of power and light plants at Albany, N. Y., and Camden, N. J., were cast on November 5. The voters of both the city and county of Albany were asked to decide (a) whether the mayor of Albany should appoint a committee with power to issue bonds for the construction of a new electric plant or the acquisition of an old one privately owned; (b) whether the county should spend \$25,000,000 for electric generating and distributing facilities outside of Albany. Camden cast a vote of 5 to 1 for a municipal electric light plant, compared with 2 to 1 in 1933. The earlier vote was declared illegal because the election petition had too few signatures. In Wisconsin a district electric light and power system for Burnett and Polk counties was authorized by a vote of 3227 to 1097. Of 28 towns and villages which voted 21 approved the project. This referendum was the first one held in Wisconsin under an enabling act passed in 1931. In New York City a proposed referendum vote on November 5 to decide whether the city should build an electric plant to supply part of the city and at the same time to serve as a "yardstick" to measure the justness of rates being charged by private companies was enjoined on the ground that the proposal did not comply with existing legislation. Defeat of a \$1,500,000 bond issue by Jackson, Miss., to build a plant to distribute electric current supplied by the TVA was registered by popular vote early in 1935. On December 3, Oxford, Miss., voted against buying current from the TVA for its city-owned light and power plant.

MURAL PAINTING. See PAINTING.

MUSEUM OF MODERN ART FILM LIBRARY. See ART MUSEUMS.

MUSIC. General News. Among the notable musical anniversaries of 1935 were the 250th birthdays of Johann Sebastian Bach (March 21) and George Frederick Handel (February 23), which were commemorated by organizations of all kinds in America and Europe during the first half of the

year. The most intensive celebration was in Germany, where the government sponsored a series of festivals which also took note of the 350th birthday (October 8) of Heinrich Schütz. The observance of the centenary of Camille Saint-Saëns (October 9), while also international, centred in Paris, where President Lebrun and Mme. Saint-Saëns were guests of honor at a gala performance of *Samson et Dalila* at the Opéra.

Among living composers, the seventieth birthday of Jean Sibelius (December 8) was extensively celebrated in Finland, where the entire season of the Municipal Symphony Orchestra of Helsinki had been planned by its conductor, Georg Schneevoigt, with this event in view. Armas Jarnefelt, the composer's brother-in-law, conducted a jubilee concert of his music in Helsinki on the day itself, and the *Uusi Suomi*, the principal newspaper of the Finnish capital, published a special Sibelius supplement with tributes from musically prominent persons all over the world. Orchestras in many other countries, especially in England and the United States, featured his music on their programmes during the autumn months.

The United States Government began to deal with the serious problem of unemployment among professional musicians on a national scale through the Federal Music Project, which began its activities in August and planned to give employment to the 18,000 musicians on relief rolls throughout the country. In places such as New York City, where an extensive series of free concerts had been supported from various official sources for two years, existing activities were continued and expanded, but there were parts of the country where little had been done, except by private aid, towards furnishing relief employment.

Nikolai Sokoloff, former conductor of the Cleveland Orchestra, was made national administrator, and the country was divided into 11 regions, each under a regional director. New York City, where a quarter of the unemployed musicians in the country were said to live, was made one of the regions.

In Europe, despite threats of war, musical activities were brisk. England had a prosperous musical year, while Paris again probably outranked other Western capitals in the numerical total of musical events of all kinds. In Germany it was estimated that there were 100 opera theatres in active operation. Musical affairs there had become relatively stabilized after the politically caused upheavals of the last two years, but on July 13, soon after the production of his opera *Die Schwiegsmutter*, Richard Strauss resigned his positions as president of the Reich Music Chamber and chairman of the League of German Composers. Peter Raabe and Paul Graener were appointed as his successors. "Old age and failing health," was Strauss's announced reason for this step, but it was believed that official disapproval of his collaboration in this opera with an Austrian-Jewish author, Stefan Zweig, was the real principal factor.

The troubled international political situation in Europe did not prevent an increasing amount of exchanges of visits by prominent organizations of various countries. The Paris Opera appeared in Florence in the "Musical May" festival, while the Florentine opera company came to Paris in June. In March, an Italian opera company appeared in Vienna while the Vienna State Opera's forces went to Rome. An increasing number of musicians from Western Europe and America included Russia in their tours.

A \$1000 prize competition offered by the Pade-

wski Fund of Boston for an orchestral work was won by Allen Arthur Wilman, of Chicago, and Normand Lockwood won the \$1000 prize for an orchestral composition offered by G. F. Swift, of Chicago. The Library of Congress, through the Elizabeth Sprague Coolidge Foundation, announced a \$1000 prize for a work for strings, and in September the National Broadcasting Company opened a contest, with a first prize of the same amount, for an American chamber music composition.

In February the noted violinist, Fritz Kreisler, revealed that 14 works previously listed as and generally believed to be his transcriptions and arrangements of manuscript works of various early composers—Porpora, Pugnani, Vivaldi, and others—were his own compositions. The announcement came in answer to a query from Olin Downes, music critic of the New York *Times*, who had been trying to locate one of the purported originals of these works, but Mr. Kreisler had already decided to list these as his own in the 1935 catalogue of his compositions. His reason for assigning them to relatively little known early composers dated, he said, from early in the century, when, as a young musician, he felt the need of enlarging the existing violin repertoire, but thought that it might be untactful to place his name too often on his programmes.

Artists. An unusually sudden rise to fame was experienced in February by Kirsten Flagstad, a Norwegian soprano who had been engaged by the Metropolitan Opera Association of New York for Wagner rôles after Frida Leider had decided not to return to America. In New York, little was known about her career and capabilities, except that she had sung in opera for many years at the State Theatre in Oslo, had also appeared in Sweden and, in Germany, had sung minor rôles in the "Ring" cycle in the Bayreuth festivals of 1933 and 1934.

Her first performance at the Metropolitan, as Sieglind in *Die Walküre* on February 2, revealed remarkable and unexpected vocal powers, and her second appearance, as Isolde on February 6, drew praise from the critics of a rarely equalled warmth for the remarkable quality and power of her voice and the dignity of her acting. She immediately became the principal box-office attraction at the Metropolitan for the rest of the season, and was engaged for an intensive three months' American concert tour in the fall before her return to the Metropolitan.

Igor Stravinsky began in January his first American tour in 10 years, conducting several of the principal symphony orchestras of the United States and also giving joint recitals with the violinist Samuel Dushkin.

Yehudi Menuhin, who celebrated his eighteenth birthday in January, spent most of the year in a round the world tour before beginning a year's retirement from the concert platform at his home in California. His recitals in Australia before capacity audiences, evoked critical encomiums surpassing in warmth even those previously bestowed upon him in America and Europe.

After some years of a decline from the peak figures of 1926-27, the number of song, piano, and violin recitals given in New York during 1934-35 showed a substantial increase over the preceding season. The autumn brought a remarkable number of piano recitals—39 up to December 1, as compared with 21 in the same period in 1934.

In the biennial Young Artists' Contest of the National Federation of Music Clubs, held in April at Philadelphia, first prizes were awarded to Mar-

garet Harshaw, contralto; Joseph Knitzer, violinist, and Rosalyn Tureck, pianist.

Choral Music and Associations. The Bach and Handel anniversaries naturally influenced the programmes of choral groups in both America and Europe. In the United States the B minor mass was probably the favorite choice among Bach's major works, followed by the *St. Matthew Passion*.

William Walton's oratorio *Belshazzar's Feast*, which had been heard in several other American cities in 1934, finally was introduced to New York on January 9 by the Schola Cantorum conducted by Hugh Ross. The number of European choruses touring the United States, including the Don Cossack Russian Male Chorus, which gave its 3000th concert on November 29 in New York, the Singing Boys of Vienna, and the Little Singers of the Wooden Cross from Paris, was increased by the arrival in October of the Moscow Cathedral Choir under Nicholas Afonsky's direction, which won a very favorable reception in its first American concerts.

Two important new Italian works had their first performances in Rome. Don Licinio Refice's *La Samaritana* was introduced in January in an Augusteo concert under Bernardino Molinari, and G. Francesco Malipiero's *La Passione* was first heard at the Augusteo in December.

Chamber Music. The major event of the year in the chamber music field was the seventh festival presented by the Elizabeth Sprague Coolidge Foundation at the Library of Congress in Washington, April 7 to 9. This began with a Bach-Handel programme played by a small orchestra of Rochester Philharmonic musicians under Howard Hanson's direction with John McCormack as the vocal soloist.

The Kolisch Quartet of Vienna made its American debut in the morning concert of April 8, introducing a work commissioned for this festival, Bela Bartok's fifth quartet. The Kolisch group, which was enthusiastically acclaimed, gave a few more concerts before returning to Europe, and was engaged for a longer American tour in the winter of 1936. In the evening the Paris Instrumental Quintet gave the public premiere of Malipiero's *Sonata a cinque*. An American programme, with the Gordon String Quartet and Frank Sheridan, pianist, as participants in quartets by Quincy Porter and Werner Janssen and a Stravinsky programme with the composer taking part occupied the concerts of the final day.

The Stradivarius Quartet of New York was re-organized in the fall, with Wolfe Wolfensohn and Alfred Pochon as its violinists, Marcel Dick as violist, and Iwan d'Archambeau, who, like Mr. Pochon, had been a member of the famous Flonzaley Quartet, as cellist. James Levey, who had been leader of the London String Quartet for many years, joined the Hart House Quartet of Toronto as its first violinist in the fall.

Festivals, American. The Eastman School of Music held its fifth annual festival of American music in Rochester, N. Y., from April 2 to 5, with Howard Hanson in general charge. The programmes included new instrumental music by Bernard Wagenaar, William Grant Still, Paul White, Gerald Keenan, Gardner Reed, Burrill Phillips, Herbert Inch, Bernard Rogers, Carl Eppert, and Gustave Soderlund. In the closing programme Robert Russell Bennett's ballet-opera *Endymion* had its first public performance.

The twenty-eighth festival of the Bach Choir of Bethlehem, Pa., May 17 and 18, was devoted to the

B minor mass and *St. Matthew Passion*, which had also been performed in a Bach festival at Reading, Pa., on April 27 and 28 under the direction of N. Lindsay Norden.

In the forty-second May festival at Ann Arbor, Michigan, Dr. Hanson conducted the world premiere of his *Drum Taps*, a choral setting of three poems by Walt Whitman, on May 15. Other major works performed in the festival, with Frederick Stock and Eric De Lamarer conducting the Chicago Symphony Orchestra, were Honegger's *King David*, May 16, and the original version of Mousorgsky's *Boris Godunoff*, in Calvocoressi's English translation, on May 19.

In the biennial May festival in Cincinnati, May 22 to 25, with Eugene Goossens conducting the Cincinnati Symphony Orchestra and festival chorus, the *Stabat Mater* by Martin G. Dummler, of Cincinnati, had its first performance on May 25. Granville Bantock's *Atalanta in Calydon*, in its first complete performance in the United States; Cyril Scott's *La Belle Dame sans Merci*, Bach's *St. Matthew Passion*, and Kodaly's *Psalmus Hungaricus* were the other important items in the festival repertoire.

In Detroit, from May 24 to June 2, 10,000 persons, representing 41 musical groups, took part in a large outdoor International Music Festival.

Albert Stoessel was again the director of the seventy-sixth festival at Worcester, Mass., September 30 to October 5, which closed with a performance of Puccini's *La Bohème* in English, with Metropolitan Opera principals. Bach's *Magnificat*, Elgar's *The Music Makers*, Hanson's *Drum Taps*, and Wolf-Ferrari's *La Vita Nuova* were the principal choral works performed.

Festivals, Foreign. With the presence of Arturo Toscanini, who conducted Beethoven's *Fidelio* and Verdi's *Falstaff* in addition to some of the Vienna Philharmonic Orchestra's symphony concerts, the annual festival at Salzburg, Austria, attracted much international attention and patronage, and the lodging facilities of the small city were severely taxed. The festival extended from July 27 to September 1. Bruno Walter conducted Wagner's *Tristan und Isolde*, Mozart's *Don Giovanni* and *Die Entführung aus dem Serail*. Felix Weingartner conducted Mozart's *Così fan tutte* and *Marriage of Figaro* and Josef Krips conducted Strauss's *Der Rosenkavalier*. Erich Kleiber, Adrian Boult, and Messrs. Walter and Weingartner shared the direction of the symphony concerts with Mr. Toscanini.

At Bayreuth 1935 was an off year, but the usual Wagner and Mozart festival was held at Munich from July 24 to August 27, with a repertoire of eight Wagner music dramas and six operas of Mozart. Hans Knappertsbusch and Paul Schmitz, of Leipzig, were the conductors. During the latter part of August, there was also a Strauss opera series.

The officially sponsored Bach-Handel-Schütz anniversary festival observances in Germany were shared by several cities. Berlin had a Bach Week May 4 to 11 and a Handel festival May 27 to June 1. In Halle, the composer's birthplace, there was a Handel festival from February 22 to 24 and another in June. A Schütz festival, including music by other early composers, was held at Dresden May 16 to 19, and Leipzig had its principal Bach festival June 21 to 24.

The year's principal Italian festival was the *Maggio Musicale* at Florence, beginning April 24 and continuing through May. In Pizzetti's opera

Orseolo, which had its world première, the choral writing was regarded as the strongest point. Other Italian operas presented under the direction of Tullio Serafin and Vittorio Gui were Rossini's *Mosè*, Bellini's *Norma*, and Verdi's *Un Ballo in Maschera*. The Paris Opéra presented Rameau's *Castor et Pollux* and a ballet programme. Bruno Walter conducted the Vienna State Opera's company and the Vienna Philharmonic Orchestra in Mozart's *Entführung* and Beethoven's *Ninth Symphony*. Bach's Brandenburg concertos were presented in two concerts under Adolf Busch's direction. The choral repertoire included Haydn's *The Seasons* and Verdi's *Mansoni Requiem*.

The thirteenth festival of the International Society for Contemporary Music was originally scheduled for Carlsbad, but finally transferred to Prague, after the Carlsbad municipal council had withdrawn its invitation. In the two orchestral concerts and two chamber music programmes held between September 2 and 6, a long list of works from all parts of Europe was presented, but none of these were regarded as of unusual importance.

In England, the annual Three Choirs Festival was held in September at Worcester where, owing to its associations with the late Sir Edward Elgar, his music occupied a considerable part of the programmes, including *The Dream of Gerontius*, *The Apostles*, and the cello concerto. The choral novelties were Dr. W. H. Harris's *Michaelangelo's Confession of Faith* and Dr. George Dyson's *The Apostles*.

In Australia the third City of Sydney Eisteddfod, in August, had over 10,000 entries in 235 sections for the various competitions.

Opera in America. The Metropolitan Opera Association of New York began the year facing the now annual problem of finding financial support for the next season. This was complicated by the need of finding a new general manager to succeed Giulio Gatti-Casazza, who retired at the end of the 1934-35 season in April after 27 years in this post. Campaigns to raise guaranty funds had been conducted through public appeals in 1933 and 1934, but it was doubted whether a third appeal would be effective.

Negotiations conducted with the Juilliard Musical Foundation, which had contributed \$95,000 to the Metropolitan in the last three depression years, resulted in reaching an agreement early in March. This provided that the Foundation would supply \$150,000 to underwrite the activities of 1935-36, including a regular winter season on the existing basis and a supplementary season, intended to give young American artists more opportunity than the regular season could offer, at popular prices in the spring of 1936.

The Metropolitan was required by the terms of the agreement to find an additional \$100,000 to underwrite the 1935-36 programme, to make further reductions in operating expenses, and to conduct a campaign to obtain a 10 per cent increase in the advance revenue from season ticket subscriptions. The agreement also provided for Juilliard representation on the Metropolitan's board of directors, and an opera management committee with members from both organizations.

Herbert Witherspoon, once a basso in the Metropolitan's artistic roster and later artistic director of the Chicago Civic Opera, was appointed successor to Mr. Gatti-Casazza as general manager, with Edward Ziegler continuing as assistant general manager. Edward Johnson, a leading tenor of the company since 1922, was also made an assistant

general manager, and was to have special charge of the supplementary spring season.

Mr. Witherspoon announced his intention of initiating various reforms, including more up-to-date operatic acting, improvements in the scenery and also a new deal in regard to the ballet, which had played a rather negative rôle in the last few years. He took up his new duties energetically, listening to 279 would-be members of the company in auditions and took an active part in the current efforts to stimulate new interest and support for the Metropolitan. On May 8, the directors decided that the subscription campaign had been sufficiently successful to justify going ahead with the plans prepared in accord with the Juilliard agreement. But two days later Mr. Witherspoon died suddenly in his office at the opera house. Edward Johnson was appointed his successor, and announced his intention of preparing for the new season, so far as possible, along the lines planned by Mr. Witherspoon, who had engaged 47 singers, including 9 newcomers, for 1935-36.

The regular subscription season of 1934-35 began December 22 and closed March 30. Of 128 opera performances 106, including 4 post-season presentations, were at the Metropolitan. The company gave 6 performances in Brooklyn, 2 apiece in Newark and Baltimore, and 1 apiece in Hartford and Rochester. Most of the post-season tour was devoted to a week in Boston.

In its home performances, the Metropolitan gave 37 operas, including 18 works in Italian 57 times, 11 in German (all but 2 by Wagner) 41 times, 6 in French 14 times, and 2 in English 4 times. Wagner was represented by 36 performances of 9 works; Verdi, by 19 performances of 6 works, and Puccini by 11 performances of 3 works. What with the box-office drawing power of the Norwegian soprano, Kirsten Flagstad (see under *Artists*) *Tristan und Isolde* was the season's most performed work at the Metropolitan, where it was heard 7 times. Including performances elsewhere, *Tannhäuser* and *La Bohème* tied for frequency of representation with 8 performances each.

The season's only actual novelty, produced January 24, was a one act opera, *In the Pasha's Garden*, with music by John Laurence Seymour, a Californian, and a libretto by H. C. Tracy based on a story in H. G. Dwight's *Stamboul Nights*. Lawrence Tibbett sang the title rôle of the Pasha and Ettore Panizza conducted. The opera met with scant favor from the critics, the music being regarded as derivative and static, while the libretto missed some of the dramatic possibilities of Dwight's story.

The only other new production, on February 23, was a pair of Italian *opere buffe*, Pergolesi's 200-year-old *La Serva Padrona*, new to the Metropolitan, and Donizetti's *Don Pasquale*, which had been out of the repertoire for 21 years. In *Don Pasquale* the principals were Lucrezia Bori, Tito Schipa, Giuseppe De Luca, and Ezio Pinza; Vincenzo Bellezza conducted. This production marked the Metropolitan's best work of the season outside of the Wagner list. In a revival of Strauss's *Der Rosenkavalier* Lotte Lehmann, Maria Olszewska, and Emanuel List sang the three major rôles for the first time in New York, and Mme. Lehmann was also heard for the first time at the Metropolitan in a revival of *Tosca*. Bellini's *La Sonnambula* and Verdi's *La Forza del Destino* returned to the repertoire with mainly familiar casts.

Besides Mme. Flagstad, the foreign débutants of 1934-35 were Dino Borgioli, Italian tenor, who made no more than a passing impression, and Anni

Konetzni, soprano of the Vienna State Opera, who did not do herself justice until her final appearance as Isolde on January 27. The American newcomers were Helen Jepson, who sang the soprano rôle in *In the Pasha's Garden*; Kathryn Meisle, contralto, an experienced artist, and Myrtle Leonard, contralto. None of these three had an extensive opportunity, but all were reengaged for 1935-36. Mary Moore, 21-year-old soprano and a native New Yorker, was indisposed at the time set for her début and appeared, in the regular season, only in a Sunday night concert.

Mr. Johnson began his preparations for the next season by a two-months' trip to Europe to seek new talent. During the next few months, he brought the vocal roster up to 79, only 4 less than the 1934-35 figure, the non-return of 23 artists, including the well-known veteran Roman barytone, Giuseppe De Luca, being offset by the engagement of 17 singers, of whom 11 were Americans, new to the Metropolitan, besides 2 artists, Edith Mason, soprano, and Marion Telva, who returned to the company after several years' absence. Except for engagement of Gennaro Papi, also a former member of the Metropolitan, to succeed Vincenzo Bellezza, the conductorial staff was unchanged. Wilhelm von Wymetal, senior, who had left the company in 1931, was asked to undertake his former position of stage director, but proved unable to do so owing to his health, and Leopold Sachse, formerly of the Hamburg Opera, was engaged in his stead.

The new general manager said frankly that financial limitations made it possible to undertake certain reforms only gradually. There was, however, some reorganization in the orchestra and chorus and the provision of new sets for the first two productions of the new season, *La Traviata*, December 16, and *Die Walküre*, December 18, by Jonel Jorgulesco, whose sets for *Don Pasquale* had won praise. A modern ventilation system was installed in the opera house.

The American Ballet Ensemble, with George Balanchine as ballet master, was engaged by the Metropolitan in August, and it was announced that separate ballet productions would again be included in the repertoire for the first time since 1927. Mr. Witherspoon's plans had contemplated the production of an American opera, but none had been chosen by the opening of the season. It was said that the new management had examined many American scores, but found that in the best of these a good score was hampered by a weak libretto, or vice versa, or that the production cost was estimated as too great for a season intended to be self-supporting. As finally chosen, the repertoire included no novelties or revivals of works that had been out of the repertoire for more than a few years. *Carmen* received a new production December 27, with Rosa Ponselle singing the title rôle for the first time. The 1935-36 regular season, like its predecessor, was to last 14 weeks.

Outside of its regular series, the Metropolitan sponsored a special performance on April 12 to celebrate the fiftieth anniversary of Walter Damrosch's New York début as a conductor. Mr. Damrosch conducted Act II of Beethoven's *Fidelio* and Act III of Wagner's *Die Meistersinger*, the latter in English with an American cast.

The principal American operatic novelty of the year, *Porgy and Bess* with music by George Gershwin and a book adapted from the dramatic version of Du Bose Heyward's story of life among the Negroes of Charleston, was produced by the Theatre Guild at the Guild Theatre in New York on Octo-

ber 10, after a short Boston run opening September 30. Alexander Smallens conducted, while the cast, except for the few representatives of white rôles, was composed of Negro singing actors. Their work and the stage direction of Rouben Mamoulian were warmly praised. Mr. Gershwin's score had its uneven points, and showed at times the effect of the composer's long association with the musical comedy field. But it proved at times highly effective both from a musical and a dramatic point of view, and was described by Lawrence Gilman in the New York *Herald Tribune* as "the most noteworthy thing that he (Gershwin) has given us." The opera was still running in New York at the end of the year.

The most noteworthy new foreign opera to be produced in America in 1935 was Dmitri Shostakovich's *Lady Macbeth of Mzensk* or *Katerina Ismailova*. The Cleveland Orchestra, conducted by the enterprising Dr. Artur Rodzinski, gave the first performance outside of Russia in Cleveland on January 31, and repeated it at the Metropolitan Opera House in New York on February 5, under the auspices of the League of Composers. The singers were members of "The Art of Musical Russia," composed mainly of Russian singers living in the United States; Anna Leskaya and Ivan Ivantsoff sang the principal rôles. In a praiseworthy, well coordinated production, the work caused some raising of eyebrows; the plot involved three murders and a seduction scene accompanied by some particularly descriptive music. The music in itself was found by several critics to be rather sterile and derivative, but the score showed unusual theatrical sense and ability for dramatic description.

The Russian company also gave the work in the Philadelphia Orchestra's opera series early in April, and produced *Boris Godunoff* in this series in January, besides giving six performances in New York on its own account in February and March.

Maria Malibran, a romantic opera in three acts with music by Robert Russell Bennett and book by Robert A. Simon, was first produced at the Juilliard School of Music in New York on April 8 with Albert Stoessel conducting. Mr. Bennett's well wrought, discreetly modern score tended to seek the background and abstain from melodic flights, perhaps to a somewhat undue extent.

Fritz Reiner and Alexander Smallens shared the direction of the Philadelphia Orchestra's opera series at the Philadelphia Academy of Music. This had been inaugurated in October, 1934, after the Metropolitan Opera Association had withdrawn from Philadelphia. Besides the two Russian operas mentioned above, the series included Verdi's *Falstaff*, February 1, Gluck's *Iphigénie en Aulide*, February 22; Mozart's *Marriage of Figaro*, March 15, and *Die Meistersinger*, April 24. Each opera was given three times. The Verdi and Mozart works were given in English, the latter in a new translation by the British authority on Mozart, Edward J. Dent. The performances of *Iphigénie*, with Mr. Smallens conducting, were the first in the United States; Cyrena Van Gordon sang the title rôle. In *Die Meistersinger* Fritz Wolff, German tenor, made his American début.

Artistically the series was successful and aroused unusual interest, in which the opportunity to hear opera with a first class orchestra, the unconventionality of the repertoire and various departures from routine ways, especially in the staging, were prominent factors. But the financial results were less encouraging, due in part to low admission prices,

and the deficit was reported to be about \$240,000. As a result opera was dropped as a regular feature for the following season, except for Borodin's *Prince Igor* in a special festival series on December 23, and Philadelphians began to negotiate for the Metropolitan's return. Four performances were finally arranged for, beginning with *Tosca* December 17.

Besides *Lady Macbeth*, the Cleveland Orchestra gave *Tosca* January 3 and 5; *Il Barbiere di Siviglia* March 7 and 9, and *Die Meistersinger* April 13 and 15. The 1935-36 opera series, beginning with *Der Rosenkavalier* October 31 and *Carmen* November 28, was reduced from six to four performances, but the first two productions were each repeated twice. The Cincinnati Symphony Orchestra, under Eugene Goossens, made its opera début with a Wagner series of four productions, including *Die Walküre* in November and *Tannhäuser*, in English, in December. The Detroit Civic Opera Company completed its first season in alliance with the Detroit Symphony Orchestra with a May series offering *La Rondine* in English, *Faust* and *Peter Ibbetson*. *Tosca* was produced in this series in November.

The Chicago Grand Opera Company, renamed Chicago City Opera Company, held its third season under Paul Longone's general management at the Civic Opera House from November 2 to December 7. One work, *Gale*, a one act opera by the English composer-pianist, Ethel Leginska, had its world première under her direction on November 23. Respighi's *La Fiamma*, first produced in Rome in January, 1934, was performed for the first time in the United States on December 2 with Richard Hageman conducting and Rosa Raisa, Joseph Bentonelli, and Carlo Morelli as the principals. Regarded as marking an advance over Respighi's previous operatic works, it was repeated on December 7.

The season began with Boito's *Mefistofele* in a revival with Ezio Pinza, of the Metropolitan, in the title rôle and Frank Forest, a young tenor from St. Paul, as Faust. Massenet's *Thais* was revived November 11, with Helen Jepson as its heroine, and Strauss's *Rosenkavalier* had a revival November 16 with Lotte Lehmann as the Marschallin. Apart from *Lohengrin*, *Don Giovanni*, and Puccini's *Turandot*, the other operas were chosen from the familiar Italian and French list. Mila Kocova, coloratura soprano of the Czech Opera in Prague, made her American début November 16 in *Rigoletto*. Gennaro Papi resigned as conductor in the third week of the season, and Mr. Hageman took over the production of *La Fiamma*.

The thirteenth season of the San Francisco Opera Association under Gaetano Merola's general management, from November 1 to December 2, was distinguished by the presentation of the four music dramas of Wagner's "Ring" cycle in order with Artur Bodanzky, of the Metropolitan Opera, conducting, and casts consisting mainly of Metropolitan artists, including Kirsten Flagstad. The latter part of the season was devoted mainly to Italian and French works, including Puccini's seldom heard *Suor Angelica*. A week of opera in St. Louis, beginning October 31, offered *Turandot* with Maria Jeritz, *Tristan und Isolde*, *Tannhäuser*, and *Faust*.

The touring San Carlo Company had a successful season extending well into the spring, and set out again on another long coast-to-coast tour, with Göta Ljungberg and Cyrena Van Gordon, both of the Metropolitan, as guest artists for its first few weeks.

As usual, the principal opera series in South

America was the annual winter season at the Teatro Colon in Buenos Aires, which began May 22 with Gluck's *Alceste*. An Argentine opera, *La Novia del Hereje* with music by Pascual de Rogatis had its first production in June, and Weinberger's *Schwanda* was introduced to South America in July. The varied repertoire included works such as Wagner's "Ring" cycle and *Tannhäuser*, Smetana's *Bartered Bride*, Mozart's *Don Giovanni*, Rabaud's *Marouf* and Moussorgsky's *Boris Godunoff*, besides standard Italian and French works.

Opera in Europe. The six weeks' season at Covent Garden in London was devoted mainly to music of Wagner and Rossini, including the latter's *L'Italiana in Algeri* with Conchita Supervia; *La Cenerentola* and *Barbiere di Siviglia*. Frida Leider, Lauritz Melchior, Max Hirs, Emanuel List, and Alexander Kipnis were among the principals in the Wagnerian list, including the "Ring" and *Tristan und Isolde*. *Schwanda*, a London novelty of 1934, was repeated, and large audiences went to *La Bohème* to hear the American soprano, Grace Moore, who had been specializing recently in motion pictures. Sir Thomas Beecham conducted most of the Wagner operas, while Wilhelm Furtwaengler made one or two guest appearances. Vincenzo Bellezza conducted the Italian operas.

In a short autumn series in Covent Garden, Sir Thomas conducted the first performance in England of Frederick Delius's *Koanga*, which has its locale in Louisiana, on September 23.

John Chrystie gave a second Mozart festival late in the spring at Glyndebourne, Sussex, presenting *The Marriage of Figaro*, *Così fan tutte*, *Die Zauberflöte*, and *Die Entführung aus dem Serail*. Popular-priced opera with a repertoire of notable variety and interest was again presented throughout most of the year in London by the Sadler's Wells company.

The first American composer to be represented at a French national theatre was Samuel L. M. Barlow, of New York, whose light opera *Mon Ami Pierrot* with a libretto by Sacha Guitry was first produced January 11 at the Paris Opéra-Comique, where Antoine Mariotte's *Gargantua*, written early in the century, had its première in February. A later novelty was Emanuel Bondeville's *L'École des Mairs*, adapted from Molière.

Reynaldo Hahn's Shakespearian opera *Le Marchand de Venise* had its first production at the Paris Opéra on March 29. Rameau's *Castor et Pollux* was revived in April, and taken by the Opéra to Florence for its May festivals, while the Florentines paid a return visit to Paris in June, giving *Norma* and the Verdi Requiem. Wilhelm Furtwaengler conducted Wagner operas in German in the Opéra's spring festival series. In October, while the Opéra observed the Saint-Saëns centenary with *Samson et Dalila*, the Opéra-Comique revived Saint-Saëns's *Phryné*.

One of the principal Italian premières of the year was that of Pietro Mascagni's *Nerone* on January 16 at the Teatro alla Scala in Milan with the composer conducting and Aureliano Pertile in the title rôle. The first season at the Royal Opera in Rome under the artistic direction of Tullio Serafin, formerly of the Metropolitan in New York, was regarded as successful. The season, which began Dec. 27, 1934, with Monteverdi's *Orfeo* in Giacomo Benvenuti's edition, was mainly devoted to familiar works. An arrangement announced in May provided for an artistic exchange between the Royal Opéra and La Scala, including productions, artists, settings, and technical staffs.

The centenary of the death of Vincenzo Bellini, September 24, was observed in the repertoire of most Italian opera houses, but particularly in his native city, Catania, where four of his works were presented in a winter series.

Clemens Krauss made his début as artistic director of the State Opera in Berlin on January 15 with a much lauded production of *Die Meistersinger*. Restaged productions of the "Ring" music dramas and of some of Strauss's operas followed. *Der Prinz von Homburg*, the 100th opus of Paul Graener, had its world première at the State Opera March 14. The German Opera House in Berlin, closed for five months for extensive renovation, was reopened with *Die Meistersinger* on November 15.

Richard Strauss's eleventh opera, *Die Schwiegertante Frau*, was first produced at the State Opera in Dresden on June 24, with Karl Böhm conducting and Friedrich Plaschke in the principal rôle of Admiral Morosus. Other important parts were sung by Maria Cebotary, Helene Jung, Mathieu Ahlersmeier, and Martin Kremer. Stefan Zweig's libretto was an adaptation of a comedy by Ben Jonson.

The opera, essaying a revival of the classic Italian *opera buffa* style, again exhibited Strauss's orchestral wizardry, and was regarded as both clever and extremely exacting. Parts of the score were praised for much beauty as well as constructive mastery, but the effectiveness of the first act was offset by the length of the second, and it was felt that considerable cutting would be needed to gain popularity.

In Munich, Mozart's early opera *La Finta Giardiniera* was produced January 13 at the Residenz Theatre with a new revision of the text by Siegfried Anheisser. The National Theatre began its 1935-36 season under Oscar Walleck as intendant with a considerably enlarged orchestra and chorus. Frankfurt's principal novelty of the year, Werner Egk's *Die Zaubergeige* with a book based on Bavarian marionette folk comedy, won praise in its première on May 22.

The opera *Caponsacchi* by the American composer Richard Hageman had its first performance in Vienna at the Volksoper on March 19 under the composer's direction. At the State Opera the veteran conductor Felix Weingartner, who had been appointed director in December, 1934, had his difficulties at first, as his predecessor, Clemens Krauss, had taken several of the State Opera's principals with him to Berlin. In the June festival weeks in this house, Mr. Furtwaengler conducted opera in Vienna for the first time in three years. Others appearing as conductors, in addition to Weingartner, were Bruno Walter and Victor de Sabata.

Orchestras, American. The ninety-third season of the Philharmonic-Symphony Society of New York (counting from the foundation of the original Philharmonic Society in 1842) closed April 28. Bruno Walter conducted for the first 2 weeks in January, and Arturo Toscanini was in charge for 10 of the remaining 15 weeks of the season. The other 5 were shared by Hans Lange and the young New York conductor, Werner Janssen.

Mr. Toscanini devoted 6 of his programmes to works of Brahms. He gave only 3 works new to New York, all by Italian composers. Mario Castelnuovo-Tedesco's cello concerto was played for the first time anywhere on January 31, with Gregor Piatigorsky as soloist. Two works by Carlo Sonzogno, of Milan, *Il Negro* for cello and orchestra, and *Tango* for orchestra with organ, were both

introduced to America April 18. Both inclining towards the jazz manner, they were warmly acclaimed by the audience, but came in for some severe critical comment.

What seemed the most promising new American work given by the Philharmonic-Symphony in 1934-35 was *Music for a Scene from Shelley* by Samuel Barber, a young Philadelphian, first performed under Mr. Janssen on March 24. Arnold Schönberg's concerto for string quartet and orchestra, based on Handel's concerto grosso, Op. 6, No. 7, was introduced to America under Mr. Janssen on March 21.

Otto Klemperer returned for his second Philharmonic-Symphony engagement for 13 weeks, October 3 to December 29. His first novelties were Schönberg's Suite for String Orchestra and Roy Harris's overture *When Johnny Comes Marching Home*, both of which had been first performed by Mr. Klemperer with the Los Angeles Philharmonic on May 18 and 11, respectively. The Schönberg suite, composed in California in 1934, was a conscious reversion to an 18th century style; New York critics found it rather sterile. Mr. Harris's overture on the familiar Civil War tune had been composed especially for recording, and was taken up by other American orchestras later in the fall.

Hans Lange, relieving Mr. Klemperer for a week, gave the world première of Robert McBride's *Prelude to a Tragedy* on November 20. On November 18, it was reported that Mr. Toscanini was planning to retire from the musical directorship of the Philharmonic-Symphony Orchestra, owing to his age, 68 in March, and the consequent need of lightening his activities. This left the orchestra facing a troubled future, as none of the many conductors sharing the last few seasons with Mr. Toscanini had proved able to come anywhere near duplicating his box-office appeal.

The training orchestra of the National Orchestral Association gave three world premières: Boris Koutzen's concerto for strings and five solo instruments, March 12; Leo Sowerby's cello concerto, April 2, and Nicholas Nabokoff's *Dances de Polichinelle*, April 30. Joseph Jongen's *Symphonie Concertante* for organ and orchestra and Shostakovich's ballet suite, *The Bolt* had their American premières in this series on April 2 and December 16.

The New York Women's Symphony Orchestra, conducted by Antonia Brico, made its début in an invitation concert at Town Hall on February 18. Three public concerts followed, and a 1935-36 series of six concerts at Carnegie Hall began November 12.

The Philharmonic-Symphony Orchestra again took part in the annual summer series at the Lewisohn Stadium of City College, where, in the course of 8 weeks there were 16 performances of 8 operas and about 12 evenings of ballet programmes. Most of these were conducted by Alexander Smallens, while José Iturbi and Willem van Hoogstraten shared the direction of the symphony concerts.

The "deep-lying differences" between him and the Philadelphia Orchestra Association's management and directors which had led Leopold Stokowski to present his resignation in December, 1934, were finally composed early in February after some reorganization of the board, and Mr. Stokowski agreed to conduct for most of the first part of the 1935-36 season and to return in the spring, when an extensive transcontinental tour was to follow the close of the regular Philadelphia season. Alfred Reginald Allen was appointed Arthur Judson's successor as manager. The guest conductors

in the first months of the year were Otto Klemperer, Eugene Ormandy, and José Iturbi. Fritz Reiner and Alexander Smallens, besides sharing the opera series, conducted a series of popular-priced Sunday night concerts.

The orchestra began its thirty-sixth season October 5, when Mr. Stokowski gave the première of Harl McDonald's second (*Rhumba*) symphony, a musical expression of sentiments aroused by a contemplation of present conditions. Other novelties in Mr. Stokowski's autumn concerts were *Etenraku*, old Japanese music arranged by Konoye, October 11; Tibor Serly's *Six Dance Designs*, October 19, conducted by the composer; Arkady Dubensky's *Tom Sawyer* overture, November 29; and, in its first American performance, Francis Poulenc's concerto for two pianos, December 27. Hans Kindler and Vladimir Golschmann were guest conductors for a week apiece. The sixth season of summer concerts in Robin Hood Dell, June 28 to August 27, included opera and ballet in addition to symphony concerts under a long list of conductors.

Serge Koussevitzky conducted most of the year's concerts of the Boston Symphony Orchestra. Adrian Boult, of the B.B.C. Orchestra of London, conducted two pairs in January, with programmes largely devoted to British music. Igor Stravinsky conducted the first American performance of his *Perséphone*, with text by André Gide, on March 15. Colin O'More and Eva Gauthier were the tenor and soprano soloists with the Cecilia Society's chorus.

Dr. Koussevitzky gave first performances of three American works, Alexander Steinert's *Concerto sinfonico* for piano and orchestra and Frederick S. Converse's *American Sketches*, February 8, and Nicolai Berezowsky's *Concerto Lucio* for cello and orchestra, February 22. David Stanley Smith, dean of the Yale University School of Music, conducted the première of his *Epic Poem*, Op. 35, on April 12.

Three symphonic excerpts from Alban Berg's second opera *Lulu* had their first performances in America in the Boston concerts of March 22-23. In New York, where Dr. Koussevitzky introduced these excerpts on April 4, they were repeated by the Philharmonic-Symphony under Klemperer late in November, and met with a wide variety of critical opinion. Filip Lazar was soloist with the Boston Symphony in the American première of his piano concerto, Op. 23, on March 8. In a festival commemorating the Bach and Handel anniversaries, April 19 to May 1, Bach's *St. John Passion* and B minor Mass and Handel's oratorio *Solomon* were the major offerings.

The orchestra's fifty-fifth season began October 11, when Roussel's *Sinfonietta* for strings was introduced to the United States. Another Roussel work new to America, his fourth symphony, was performed under Koussevitzky on December 27.

The Chicago Symphony Orchestra, completing its thirtieth season under Frederick A. Stock's leadership, observed the Bach anniversary with performances of the B minor Mass in January and the *St. Matthew Passion* in April. Igor Stravinsky conducted programmes of his works on January 17, 18, and 22. Samuel A. Lieberon's suite, *In a Winter Garden* was first performed under Mr. Stock on March 14, and music by Adolph Brune, David Van Vactor, Normand Lockwood, and Louis Gruenberg was introduced in an all-American programme on April 4. The orchestra's forty-fifth season began October 17. Some of its 1935 concerts were directed by the assistant conductor, Eric

De Lamarter, and one pair late in January by Sir Hamilton Harty.

One of the principal novelties of the year presented by the Cleveland Orchestra under Artur Rodzinski's direction was Ralph Vaughan Williams's symphony in F minor, which had its first performance outside of Great Britain December 19. The Cincinnati Symphony Orchestra continued under the direction of Eugene Goossens.

Owing to a long illness beginning soon after the close of the 1934-35 season of the Detroit Symphony Orchestra, Ossip Gabrilowitsch took a year's leave of absence, leaving the season to be shared by the assistant conductor, Victor Kolar, with several guests, including José Iturbi, Fritz Reiner, Werner Janssen, Vladimir Golschmann, Dr. Rodzinski, and Bernardino Molinari.

The 1934-35 season of the St. Louis Symphony Orchestra under Vladimir Golschmann's conductorship was stated to be the most successful in its history, and a similar report was made about the first part of the following season. Mr. Janssen made his St. Louis début as guest conductor November 22. The Minneapolis Symphony Orchestra, conducted by Eugene Ormandy, gave the world première of a *Secular Mass* for orchestra and chorus by the young American composer Paul Nordoff on March 29. The Kansas City Philharmonic Orchestra, under Karl Krueger, entered its third season in the fall free from debt.

Owing to failure to raise the required guarantee fund for the projected season of the San Francisco Symphony Orchestra, there were no regular symphony concerts through the winter. Having failed to reach a compromise with the musicians' union, the San Francisco Musical Association then suspended its activities, but the city government, aided by private contributions, arranged a series of spring concerts beginning March 27 under the direction of Alfred Hertz. A tax levy to aid the orchestra was provided in a charter amendment favorably voted upon on May 2. Plans for the winter of 1936 finally agreed upon by the Association, the city and the union provided for from 8 to 10 pairs of regular symphony concerts and a popular series of 10 concerts with Pierre Monteux as conductor.

During Otto Klemperer's absence in the east and in Europe, the Los Angeles Philharmonic Orchestra appeared under several guest conductors, including Iturbi, Gabrilowitsch, Stravinsky, Hertz, Basil Cameron, and Arnold Schönberg. Mr. Klemperer returned to close the season in May. Pierre Monteux was the conductor for the first three months of the 1935-36 season during Mr. Klemperer's absence in New York. The summer series in the Hollywood Bowl began July 16 and closed September 27, with Klemperer, Monteux, Iturbi, Molinari, Ernest Schelling, and Richard Lert among its conductors. The other Pacific Coast orchestras, those of Seattle and Portland, continued under the direction of Basil Cameron and Willem van Hoogstraten.

Ernest Schelling succeeded George Siemomn as conductor of the municipally sponsored Baltimore Symphony Orchestra. The National Symphony Orchestra of Washington, under Hans Kindler, made its first northern tour early in December, going as far as Ottawa. The Rochester (N. Y.) Philharmonic continued with its policy of guest conductors, while Howard Hanson conducted it in the notable American composers' series sponsored by the Eastman School of Music. Space precludes mention of the many other orchestras, of various sizes and ambitions, active in the United States during 1935.

Orchestras, Foreign. London continued to maintain three regular orchestras during 1935, the British Broadcasting Corporation's orchestra under Adrian Boult; the London Philharmonic under Sir Thomas Beecham, and the London Symphony under Sir Hamilton Harty and others. The London Philharmonic also played in the concerts of the Royal Philharmonic Society, which began its 124th season in October. Each of these orchestras also appeared under various guest leaders, including Sir Landon Ronald, Albert Coates, Felix Weingartner, Georg Szell, Nikolai Malko, Hermann Abendroth, and Erich Kleiber. Serg Koussevitzky conducted the B.B.C. Orchestra in May, and Arturo Toscanini made some enthusiastically acclaimed appearances with it in June.

For the second successive year, the B.B.C. Orchestra gave a winter series at Queen's Hall in January. The regular summer Promenade season, again under Sir Henry Wood, extended from August 10 to October 18. Among the novelties in this series were Arthur Bliss's *Film Music—1935*, Herbert Howells's *Elegy* for strings, David Stephen's *Coronach*, and three songs with orchestra by Alexander Mossolov.

Among new works presented in the regular season were an ambitious, but not particularly well received, symphony by the Russian composer Yuri Shaporin (B.B.C. under Coates, January 23), Gordon Jacob's oboe concerto (Royal Philharmonic under Beecham, in March), Vaughan Williams's symphony in F minor (B.B.C. April 10), William Walton's second symphony (played in part in a Courtauld-Sargent concert on April 1, and the first time in full in November by the B.B.C. Orchestra under Harty), Donald Francis Tovey's cello concerto (in a Courtauld-Sargent concert under his direction in November), and Arnold Bax's sixth symphony (Royal Philharmonic under Harty).

Paris continued to be the most prolific among European capitals in the number of active orchestras and the output of new works. The Pasedeloup Orchestra, under Albert Wolff, began in the fall an attempt to solve the difficulty of the simultaneous production of novelties by various orchestras by grouping such works into four special programmes. The other principal Paris orchestras were the Colonne under Paul Paray, the Lamoureux under Eugène Bigot, the Conservatoire under Gaubert, the Poulet under Georges de Lausnay, the Siohan under Robert Siohan, specializing in modern music, and the Orchestra Symphonique de Paris under Pierre Monteux. The Vienna Philharmonic paid a visit in the spring, and the Amsterdam Concertgebouw, under Willem Mengelberg, gave a Beethoven cycle in June. Toscanini, conducting a picked orchestra of French musicians, gave a series of concerts at the Opéra in November. One of his programmes included Luigi Cherubini's symphony in D which, it was believed, had never before been played in Paris.

Orchestral activities in Italy centred in Rome, where the winter series at the Augusteo, conducted by Bernardino Molinari and several guests, had a considerable proportion of works for chorus and orchestra.

Owing to Wilhelm Furtwaengler's retirement from his posts with the Berlin State Opera and Philharmonic Orchestra in December, 1934, due to his disagreement with the official opposition to modern music, the Philharmonic's winter series was shared by guest conductors. But, in April, Furtwaengler made his peace with Reichsführer Hitler, and was ardently acclaimed on his first ap-

pearance on April 25 in a special Philharmonic concert. He resumed his regular position with this orchestra in the fall.

The orchestras of Vienna pursued a relatively tranquil course with Bruno Walter, Wilhelm Furtwaengler, Felix Weingartner, and Sidney Beer among those who shared the leadership of the Viennese Philharmonic. Toscanini appeared as guest conductor with this orchestra early in December. In Amsterdam, a festival was held in the spring to celebrate the fortieth anniversary of Willem Mengelberg's conductorship of the Concertgebouw Orchestra. Vaclav Talich and a large number of guest leaders presided over the Czech Philharmonic Orchestra of Prague. One of the principal Spanish organizations, the Orquesta Pau Casals of Barcelona, found itself in impending financial difficulties in the autumn. Guarantees were arranged to carry it through the 1935-36 season.

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MUTUAL ASSISTANCE PACTS. See CZECHOSLOVAKIA, FRANCE, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

NANYO. See JAPANESE PACIFIC ISLANDS.

NATAL. See SOUTH AFRICA, UNION OF.

NATIONAL ACADEMY OF DESIGN. A society of American artists, established in New York City in 1825 and incorporated in 1828 for the purpose of "the cultivation and extension of the arts of design." After 1906, when the Society of American Artists merged with it, its membership represented all art tendencies except what it deemed the ultra-radical.

The Academicians elected at the annual meeting on Apr. 24, 1935, included: Jerry Farnsworth, Edmund Greacen, Victor Higgins, Frederick W. Hutchison, Guy Wiggins, Painters; Georg Lober and Attilio Piccirilli, Sculptors; William Mitchell Kendall, Architect; Allen Lewis, Worker in the Graphic Arts. The new Associates elected in 1935, included: Edward Bruce, Harvey Dunn, Louis Kronberg, Robert Philipp, Everett Shinn, Maurice Sterne, W. Lester Stevens, J. Scott Williams, Grant Wood, Painters; Gaetano Cecere, Hilda Kristina Lascari, Sculptors; Paul P. Cret, Arthur L. Harmon, Architects; Donald Shaw McLaughlan, George Wright, Workers in the Graphic Arts.

Jonas Lie for president of the academy in 1935; Charles C. Curran, corresponding secretary; Charles S. Chapman, recording secretary; and

Henry Prellwitz, treasurer. Headquarters are at Amsterdam Avenue and 109th Street, New York City, where there also is located the academy's school of design.

NATIONAL ACADEMY OF SCIENCES.

A body incorporated by Act of Congress in 1863 for the purpose of investigating, examining, experimenting, and reporting upon any subject of science or art, whenever called upon by any department of the United States Government. The membership is limited to 300 active members and 50 foreign associates. New members are elected by the academy on nominations from its 11 sections: Mathematics, astronomy, physics, engineering, chemistry, geology and paleontology, botany, zoology and anatomy, physiology and biochemistry, pathology and bacteriology, and anthropology and psychology.

At the annual meeting held in Washington, D. C., Apr. 22-24, 1935, the following new members were elected: Norman Levi Bowen, Charles Manning Child, George Ellett Coghill, James Ewing, Merritt Lyndon Fernald, Harvey Fletcher, Ross Aiken Gortner, Earnest Albert Hooton, Jerome Clark Hunsaker, Walter Samuel Hunter, Dunham Jackson, Chester Ray Longwell, Harold Clayton Urey, John Hasbrouch Van Vleck, John Scott Haldane and Jules Bordet were elected foreign associates. There were presented the following gold medals: Agassiz Medal for Oceanography, to Haakon Hassberg Gran, of the University of Oslo, Oslo, Norway, in recognition of his contributions to knowledge of the factors controlling organic production in the sea; Henry Draper Medal, to John Stanley Plaskett, Director of the Dominion Astrophysical Observatory, Victoria, B. C., in recognition of his able and consistent labors in stellar radial velocities, and related studies energetically pursued for nearly 30 years; and Daniel Giraud Elliot Medal and honorarium of \$200, to James P. Chapin, of the American Museum of Natural History, New York City, in recognition of his work entitled, *The Birds of the Belgian Congo*, part i, published as a Bulletin of the American Museum of Natural History in 1932. August Vollmer, member of the staff of the Department of Political Science, University of California, and former Chief of Police of Berkeley, Calif., received the Public Welfare Medal for his application, in police administration, of scientific methods to crime detection and to crime prevention.

The academy's autumn meeting was held at the University of Virginia, Charlottesville, Va., Nov. 19-20. This was the first meeting of the Academy held in the South.

The *Proceedings*, issued monthly, are devoted to condensed reports of the most recent achievements in scientific research by members of the academy and its agent, the National Research Council, or by persons introduced by them. The officers in 1935 were: Frank R. Lillie, president; Arthur L. Day, vice president; Fred E. Wright, home secretary; Thomas Hunt Morgan, foreign secretary; Arthur Keith, treasurer. The academy building is at 2101 Constitution Avenue, Washington, D. C.

NATIONAL BOARD OF FIRE UNDERWRITERS. See FIRE PROTECTION.

NATIONAL CIVIC FEDERATION. THE. This movement was organized in 1900 to seek the solution of some of the great problems related to social and industrial progress. It provides especially for the discussion of questions of national import, aids in the crystallization of an enlightened public opinion, and promotes legislation when desirable.

The federation continued in 1935 its work based

upon a previous inquiry into the relative merits of Public versus Private Operation of Municipal Utilities. The federation's Municipal Ownership Commission, which was composed of representatives of public utility interests, labor organizations, and economists and which studied the situation in Great Britain and the United States, reported unanimously in favor of private operation, provided there were adequate regulation. These findings were adopted by the federation as its policy on the subject. It is now furthering the study of "What is Adequate Regulation?"

In view of the intensified work of the Communist Party of the United States in industrial centres, its agitation among the unemployed, its determination to incite violence in industrial disputes, and its persistent interference with all efforts to reach equitable agreements between wage earners and their employers, the department on subversive activities continued its efforts to enlighten the general public upon the menace of the Communist movement to American institutions. The federation has made persistent efforts to induce the Federal Government to serve notice upon the Soviet régime to respect its solemn pledge, made as a condition of recognition, on pain of suspension of all relations with it until such time as it is scrupulously respected.

As there have been, since Jan. 1, 1934, criminal violations of our laws, the federation has advocated that there be invoked, in the interest of law enforcement, the Federal Act providing punishment for seditious conspiracy and the various State statutes penalizing criminal syndicalism and criminal anarchy. It has continued to urge that the Congress of the United States make sufficient and adequate appropriation to enable the Bureau of Investigation of the U.S. Department of Justice to be fully advised at all times of the activities of any party, group, or organization, which seeks the overthrow of the government of the United States by force, violence, or any unlawful means.

During the past year, the federation has furthered, in the field of labor and industry, conferences designed to gain cooperation between employers and trade unionists dealing with current controversies relative to the closed shop, the company union, and other contentious issues. The constant purpose of the federation is to aid in developing a *modus vivendi* which would serve to hasten industrial recovery.

Recognizing that the primary objectives of repeal were to promote temperance, to prevent bootlegging, and to collect reasonable Federal and State taxes, and that the growth and continuance of bootlegging since repeal has not only amounted to a public scandal but resulted in enormous losses of revenue to Federal and State governments through unpaid taxes on illicit liquor, the federation has made an exhaustive survey and report upon actual conditions, in the interest of the public welfare. It recommended to the Congress of the United States a proposed solution of the problem.

The woman's department continued its policy of carrying on studies and surveys relating to women in industry, while its lecture courses on current subjects have aided in formulating public opinion on a sound basis.

The officers of the federation in 1935 were: Elihu Root, honorary president; Ralph M. Easley, chairman, executive council; Archibald E. Stevenson, treasurer; Hayes Robbins, secretary; Samuel McRoberts, chairman, economic affairs; John Hays Hammond, chairman, department on active

citizenship; William R. Willcox, chairman, industrial welfare department; Sidney L. Weedon, educational director; Maude Wetmore, chairman, woman's department; Gertrude Beeks Easley, secretary, executive council. Headquarters of the National Civic Federation were at 570 Lexington Avenue, New York City.

NATIONAL COMMITTEE ON EDUCATION BY RADIO. See RADIO.

NATIONAL DEFENSE. See MILITARY PROGRESS; NAVAL PROGRESS.

NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES. An organization of approximately 200,000 persons actively engaged in educational work or interested in the promotion of education. Its purpose is to "advance the interests of the teaching profession, promote the welfare of children, and foster the education of all the people." The Association was organized in Philadelphia and incorporated by an act of Congress in 1906. *The Journal of the National Education Association* is the official monthly publication.

The Association consisted in 1936 of 24 departments devoted to special problems in nearly every type of educational work. These departments are as follows: administrative women in education; adult education; art education; business education; classroom teachers; deans of women; educational research; elementary school principals; kindergarten-primary education; lip reading; music education; rural education; school health and physical education; science instruction; secondary education; secondary school principals; social studies; special education; superintendence; supervisors and directors of instruction; supervisors and teachers of home economics; teachers colleges; visual instruction; vocational education.

There are also more than 16 committees, including the Educational Policies Commission, at work on such problems as Federal aid for education, teacher tenure and retirement, rural education, economic status of the teacher, and social-economic goals.

The seventy-third annual convention of the Association was held in Denver, Colorado, June 30 to July 5, 1935. Special sessions were devoted to the needs of youth, economic status of the teacher, academic freedom, and other professional problems. The winter convention, under the direction of the Department of Superintendence, was held in St. Louis, Missouri, Feb. 22 to 27, 1936. The theme was "The Function of the Schools in the Democracy." The subject of the Yearbook prepared for discussion at this meeting was "The Social Studies Curriculum."

The officers for 1935-36 were: president, Agnes Samuelson, Des Moines, Iowa; executive secretary, Willard E. Givens, Washington, D. C.; secretary emeritus, J. W. Crabtree, Washington, D. C., and treasurer, R. E. Offenbauer, Lima, Ohio. Headquarters are at 1201 Sixteenth Street, N. W., Washington, D. C.

NATIONAL FORESTS. See FORESTRY.
NATIONAL GALLERY OF ART. See ART MUSEUMS.

NATIONALITY. See INTERNATIONAL LAW.
NATIONAL KINDERGARTEN ASSOCIATION. An organization founded and incorporated in New York City in 1909, with the object of helping to secure the advantages of kindergarten education for all of the nation's children. The Association is supported entirely by private subscription. The money is used for the purpose of pro-

moting a knowledge of and an interest in the value of the kindergarten as an integral part of the public school system. Field Secretaries are employed in every state to keep this matter before the public and assist parents in having classes organized for their children. Because, during 1933 and 1934, curtailed budgets closed all of the kindergartens in nearly 200 cities and towns, work has been done by the Association in connection with men's and women's local organizations to have the kindergartens reopened on a cooperative basis. In many cases this has been successful.

The Association has been instrumental in securing the establishment to date of 2048 kindergartens. Where no adequate provision has been made in the school laws for the maintenance of kindergartens, the Association has worked to stimulate an effort to secure the enactment of improved laws and has been instrumental in obtaining their passage in 16 States. In this it has cooperated with such State organizations as the Congress of Parents and Teachers, Federation of Women's Clubs, Woman's Christian Temperance Union, American Association of University Women, American Legion, Federation of Labor, and Chamber of Commerce. From 1928 to 1932, through the generosity of its members, the Association was able to set aside a fund from which 52 communities which could not otherwise have opened kindergartens, received financial assistance. Since 1912 it has cooperated with the National College of Education in Evanston, Ill., which has trained students from every section of the country. It has also published, and distributed extensively, leaflets on methods and value of kindergarten extension. The Association's weekly articles on Home Education, issued without charge to the press and to Home Demonstration Agents, reached, in 1935, a combined circulation of more than 32,000,000. Periodicals in 52 countries printed them, 1128 publications using them in the United States alone.

The officers of the Association are: Maj. Bradley Martin, president; Hon. P. P. Claxton, honorary president; Miss Lena Madesin Phillips, vice president; Mrs. Roger C. Aldrich, secretary; Miss Bessie Locke, executive secretary; and Julian M. Gerard, treasurer. Headquarters are at 8 West Fortieth Street, New York City.

NATIONAL LABOR RELATIONS BOARD. See TRADE UNIONS.

NATIONAL MUNICIPAL LEAGUE. An organization which acts as a central clearing house for current information on improvements in government throughout the United States, founded in 1894 and incorporated in 1923. Its aim is to promote efficient and democratic government in city, county, state, and nation. Among its committees active in 1935 were those on liquor legislation, model tax collection law, new municipal programme, model administrative code, model state constitution, citizens' organization for municipal activity, citizens' participation in city government, county government, municipal standards, selection of the judiciary, model special assessments law, constructive economy in government, and personnel.

The 41st annual meeting of the league was held in Providence, R. I., Nov. 25-26, 1935. Its theme was "Forty Years of Progress." Coöperating in this conference were the National Association of Civic Secretaries and the Proportional Representation League. The officers elected for 1934-35 were: President, Harold W. Dodds, Princeton, N. J.; first vice-president, Marguerite M. Wells, Washington, D. C.; second vice-president, C. A. Dykstra, Cincinnati, Ohio; treasurer, Carl H. Ffor-

heimer; and secretary and editor of the *National Municipal Review*, Howard P. Jones. Headquarters are at 309 East Thirty-fourth Street, New York City.

NATIONAL RECOVERY ACT (NRA). See CHILD LABOR; LABOR; LAW; UNITED STATES; WOMEN IN INDUSTRY.

NATIONAL RECREATION ASSOCIATION. An association organized in 1906, under the name of the Playground and Recreation Association of America, for the purpose of uniting in a national movement the efforts made in various parts of the United States to provide safe and adequate areas where children might play under experienced leadership. In recent years, however, its work has expanded to include the community as a whole, a staff of field workers being maintained to assist cities in organizing year-round programmes for adults as well as for children.

The association carries on its work through such services as physical education, music, drama, park recreation, recreation for girls and women and for institutions, a bureau of colored work, and, in cooperation with the United States Department of Agriculture, a service to rural leaders. It conducts institutes for the training of recreation workers, and an annual Recreation Congress, which in 1935 was held in Chicago, and was attended by 1000 delegates. Its official magazine is *Recreation*, a monthly. The officers in 1935 were: President, Joseph Lee; treasurer, Gustavus T. Kirby; and secretary, Howard S. Braucher. Headquarters are at 315 Fourth Avenue, New York City.

NATIONAL RESEARCH COUNCIL. An organization of American scientists, originally established in 1916 by the National Academy of Sciences for the purpose of coordinating the research facilities of the United States for work on war problems involving scientific knowledge, and reorganized in 1918 as a permanent body for the general encouragement of research in the natural sciences. The Council has close relationship with governmental scientific agencies, and has the formal recognition and cooperation of 76 national scientific and technical societies, its membership being composed mainly of appointed representatives of these societies.

The activities of the Council are conducted by seven divisions of a science and technology group and four divisions of a general relationships group. The science and technology group consists of divisions representing physics, mathematics, and astronomy; engineering and industrial research; chemistry and chemical technology; geology and geography; the medical sciences; biology and agriculture; and anthropology and psychology. The general relationships group consists of Federal, foreign, State, and educational relations divisions. Each division has a chairman and from 12 to 30 members, and maintains a number of administrative and technical committees.

Among the major undertakings of the council during 1935 were the administration of about 60 post-doctorate fellowships and a limited research aid fund; the issuing of a series of research monographs in the physical sciences, including parts of a treatise upon the *Physics of the Earth*; the editing of an *Annual Survey of American Chemistry*, the *Annotated Bibliography of an Economic Geology*, and *Child Development Abstracts*; and the sponsoring of research programmes including, among other matters, problems relating to highway construction, electrical insulation, fundamental problems of welding, hydraulic friction, the preser-

vation of books and records, isotopes of hydrogen, sedimentation, tectonics and stratigraphy, the measurement of geologic time, the chemistry and physiology of narcotic drugs, scientific problems of sex, a survey of tropical diseases, infectious abortion, the effects of radiation on living organisms, microbiology of the soil, ecology of grasslands, child development, psychological tests for automobile drivers, and American archaeology.

The general administrative officers of the council for 1935-36 were: Chairman, Frank R. Lillie, professor emeritus of embryology, University of Chicago, and president, National Academy of Sciences, Washington, D. C.; treasurer, Arthur Keith, geologist, United States Geological Survey; Executive Secretary, Albert L. Barrows. Headquarters: National Academy of Sciences Building, 2101 Constitution Ave., Washington, D. C.

NATIONAL RESOURCES COMMITTEE. In the United States, a committee, under the active direction of its Advisory Committee of three members, which has continued to discharge the duties of its predecessors, the National Resources Board and the National Planning Board, and has undertaken other investigations and studies specifically assigned.

In addition to its central staff and research sections, the Committee has had the able assistance of a number of special technical advisory planning committees composed of specialists from within and outside the Federal Government. Thus separate committees have been organized for fields of land use, water resources, science, minerals, regional planning, urban problems, and public works costs and responsibilities, which give a general idea of the broad scope of the activities of the National Resources Committee. The type of work ranges all the way from inventories of natural resources, fact finding surveys, and original research to specific recommendations and advice on such matters as coordination of Federal planning activities and public works programmes, the results of which are in most cases available in printed or mimeographed form. (See *Bibliography of National Resources Committee Reports and Circulars* [preliminary draft].)

In the field of *Regional Planning*, the National Resources Committee has made a valuable contribution through an exhaustive study by a special research committee, dealing with interstate compacts, Federal corporate authorities such as the Tennessee Valley Authority, regional organization of Federal agencies for planning, development, and administration, etc. The results are published in a report *Regional Factors in National Planning and Development*.

City and County Planning have received considerable impetus from the activities of State Planning Boards as well as indirectly through the emphasis which has been given to public works as unemployment relief. Another factor has been the availability to local planning agencies, of white collar relief workers through the FERA followed by the WPA. While no survey has been made since that reported fully in the "Eleventh Circular Letter" of the former National Planning Board referred to in the 1934 *INTERNATIONAL YEAR BOOK*, information available indicates that there are now in the United States approximately 900 city planning commissions, 350 county planning commissions, and perhaps 1300 cities in which zoning ordinances have been adopted. The National Resources Committee is planning to conduct another nation-wide survey of the status of city and county

planning and zoning during 1936 in cooperation with the State planning boards.

A few more States enacted special enabling legislation in 1935 for county planning and county zoning and while an increasing number of counties have comprehensive planning studies under way, it is of special significance that several counties scattered throughout the United States have undertaken also the preparation of a county zoning plan.

See CITY, NATIONAL, STATE, AND REGIONAL PLANNING; STATE PLANNING.

NATIONAL SAFETY COUNCIL. A co-operative association, devoted to the conservation of human life through a continuous campaign of accident prevention in industry, on the highway, in the home, and elsewhere. In 1935 there were more than 4000 members, including corporations, firms, individuals, public officials, schools, Chambers of Commerce, clubs, and civic organizations. About 70 per cent of the members were industrial concerns. Affiliated with the national organization were 51 local councils in as many communities throughout the United States.

During 1935 the council's activities laid especial emphasis on the highway accident problem. A fourth annual National Inter-City Traffic Contest was held, in which approximately 797 municipalities and 33 states participated. Educational work was intensified among urban schools throughout the country, and valuable engineering studies were made in highway safety.

The council publishes the *National Safety News* and *The Industrial Supervisor* for industries; *Public Safety*, for public officials, police chiefs, etc.; *Safety Education*, for schools; *The Safe Worker* and *The Safe Driver*, for industrial employees. It also issues *Safe Practices* and *Health Practices* pamphlets for industry and carries on extensive work through 27 sections represented in the industrial division for the exchange of new ideas, new plans, and new practices among members.

The 24th annual Safety Congress was held in Louisville, Ky., Oct. 14-18, 1935. The officers elected were: President, Dr. C. H. Watson, medical director, American Telephone and Telegraph Company, New York City; vice-president for public safety, Hon. Harold G. Hoffman, governor of New Jersey, Trenton, N. J.; vice-president for safety councils, Mr. John B. Gibson, Western Electric Company, Chicago, Ill.; vice-president for engineering, Mr. A. S. Regula, executive secretary, Industrial Relations Counselors, Inc., New York City; vice-president for industrial safety, Mr. A. V. Rohweder, superintendent of safety and welfare, Duluth, Missabe and Northern Railway Company, Duluth, Minn.; vice-president for health, Dr. Hart E. Fisher, chief surgeon, Chicago Rapid Transit Company, Chicago, Ill.; vice-president for education, Mr. A. W. Whitney, associate general manager, National Bureau of Casualty and Surety Underwriters, New York City; vice-president for membership, Mr. R. T. Solensten, vice-president, Elliott Service Company, New York City; vice-president for public relations, Mr. D. D. Fennell, consulting engineer, Chicago, Ill.; vice-president for finance and treasurer, Mr. W. E. Worth, works manager of Twine Mills, International Harvester Company, Chicago, Ill.; managing director, Mr. W. H. Cameron, Chicago, Ill. Headquarters are at 20 North Wacker Drive, Chicago, Ill.

NATIONAL YOUTH ADMINISTRATION. See CHILD WELFARE; UNIVERSITIES AND COLLEGES.

NATURAL GAS. See GAS.

NAURU, nā'ōō-rōō. An atoll in the Pacific (166° E. longitude and 26 miles south of the Equator). Area, 8.43 sq. miles; population (July 1, 1934), 2677, including 164 Europeans.

Production and Trade. The main product was phosphate (363,680 tons exported in 1933); the production of copra is small. In 1933, imports amounted to £97,684 and consisted principally of food supplies, and machinery for the phosphate industry.

Government. Revenue and expenditure for 1933 amounted to £19,779 and £18,748 respectively. Nauru was mandated to Great Britain, Australia, and New Zealand by the League of Nations. Administrator in 1934, Com. R. C. Garcia.

NAVAL PROGRESS. The disturbed state of international relations in the Mediterranean, in Central Europe and in Eastern Asia, and in other quarters of the globe, served to intensify the preparations that each nation was making for the defense of its borders, its possessions, and its lines of vital communications. The volume of naval construction in progress among the smaller powers, as well as among the great nations reflected the general concern of each government for the safety of its own interests.

Men in the street the world over, as well as statesmen and naval personnel, looked forward with the keenest interest to the naval conference of the five great powers that met in London on December 9 to consider an extension or revision of the Washington and London treaties for the limitation of Naval Armaments.

The Washington treaties of 1922 signed by the United States, Great Britain, Japan, France, and Italy, were the first to establish the ratio principle of naval construction, and eliminated the factor of competition, in quantity at least, of battleships, battle cruisers, and aircraft carriers. Definite tonnage limits were established for each power and the limits set were in the ratio 5-5-3 for the three larger naval powers and approximately 1.75 for Italy and France. A considerable tonnage of capital ships built and building was scrapped by each of the powers, the United States making altogether the heaviest sacrifices in modern vessels.

The agreements reached in Washington, however, only momentarily checked competition and changed its direction toward other types of combatant vessels. After several unsuccessful efforts to restrict naval building in cruisers and smaller vessels the treaty of London was agreed to in 1930. This was ratified by the United States, Great Britain, and Japan only. It further reduced both numbers and tonnage in capital ships, and extended limitations to include cruisers, destroyers, and submarines. In general, the ratios regarding the larger ships were continued, cruisers were divided into two categories, 8-inch and 6-inch gun ships. Japan obtained an increased ratio in destroyers and gained full parity with the United States and Great Britain in submarine tonnage. This latter treaty also fixed the age at which obsolescent ships might be replaced by new construction and provided that no capital ship might be replaced before the expiration of the treaty in 1936.

The quotas established were based largely on the tonnage of the various types existing at the time except in the case of aircraft carriers and the so-called "treaty type" of 10,000 ton, 8-inch gun cruisers, which were non-existent before the Washington conference. As the signatory powers generally possessed battleships, battle cruisers, destroyers, and even submarines in excess of the prescribed

quotas, the new construction required was either in cruisers, or to replace average ships.

The American delegation to London for the 1935 conference was headed by Ambassador Norman Davis and included Under Secretary of State Phillips, and the Chief of Naval Operations, Admiral Standley. This group wished for continuance of the existing 5-5-3 ratio; a reduction, if possible, in the amount of naval construction, but no change in the strength of the American Navy without a corresponding change in the British and Japanese Fleets; and a continuance of existing treaty limits of 35,000 tons for battleships and 10,000 tons for cruisers. As a basis for discussion, Mr. Davis proposed a flat reduction of 20 per cent in all navies, but Admiral Nagano announced instantly that Japan rejected the proposal.

Great Britain stressed her need for cruisers (70 instead of 50) to defend her trade routes. She again proposed limitation of future battleships to 25,000 tons, although she was less insistent upon this point than formerly. As usual, she asked for abolition of submarines or, at least, a drastic limitation of size. This delegation also attempted to secure a "gentleman's agreement" to replace the ratio system, this agreement to include an advance exchange of details regarding building programmes.

Japan insisted that nothing else was to be discussed until naval parity was conceded to Japan, and at the same time she demanded a continuation of the existing agreement not to fortify the Pacific Islands.

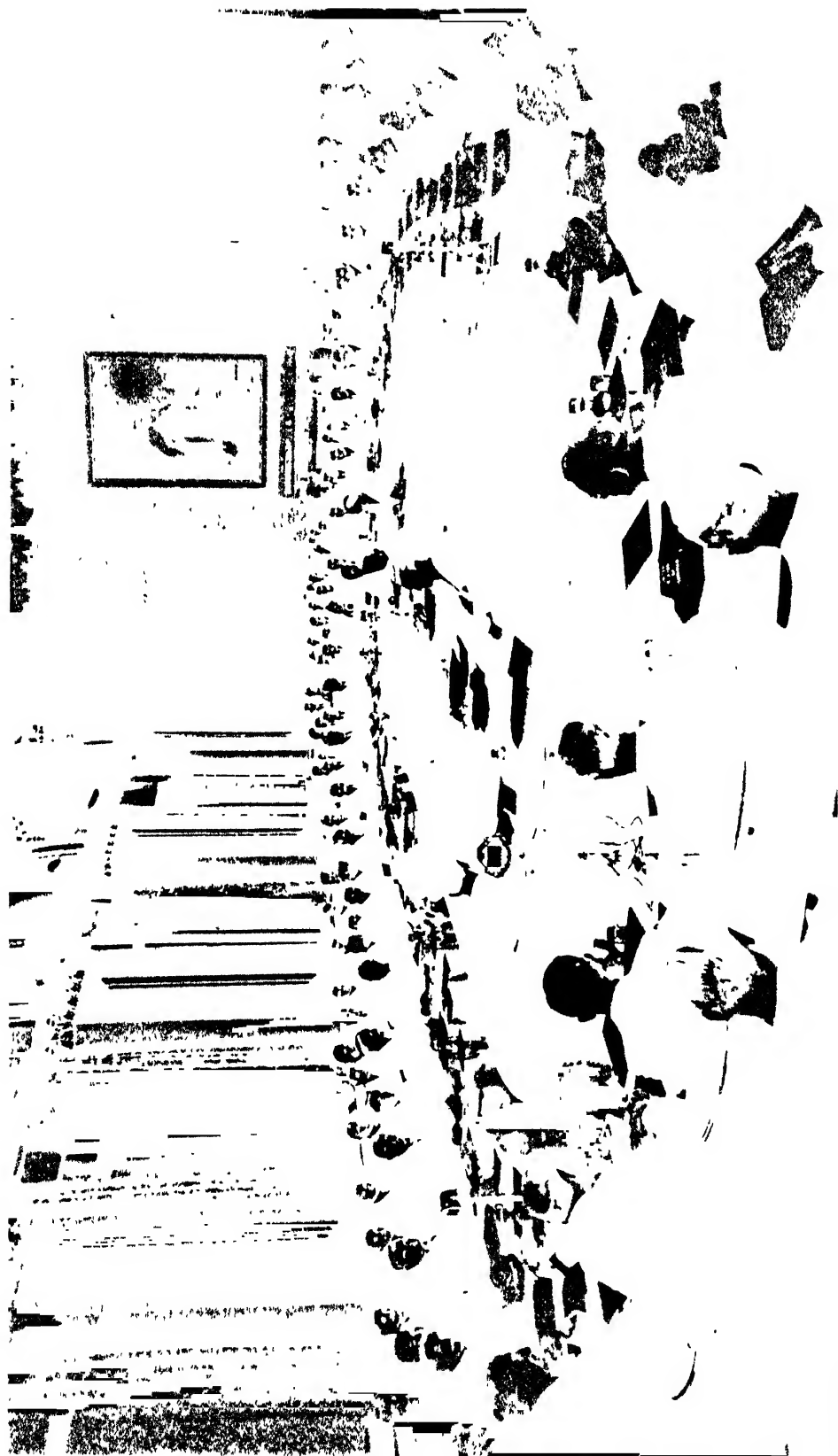
France, greatly concerned over the Anglo-German naval agreement, and the increased tonnage to be expected in Germany's new navy, wished for an agreement that would improve her position. Retention of submarines as a "defensive weapon" was also an important item in the programme.

Italy strove for equality with France in total tonnage and for an agreement that would regulate the size of British and French Fleets in the Mediterranean.

Few international gatherings have opened with more barren prospects than did that one and on December 20, when the conference adjourned until January 6, there was little to record in the way of progress. Up to that time discussion had centred on two proposals, that of the Japanese for a common upper limit and the British suggestion that each nation lay down a definite statement of its future building programmes. Neither proposal appeared to offer possibilities of actual limitation of construction, or even agreement.

The Anglo-German naval conversations, during June, 1935, were much more productive of results. Germany agreed that her fleet should never exceed 35 per cent of the aggregate tonnage of the naval forces of the members of the British Commonwealth of Nations, and that this ratio should not be affected by the construction of other powers. She reserved the right, however, to invite an examination of the new situation in case "the general equilibrium of naval armaments should be violently upset." By a further provision the 35 per cent ratio applied not merely to global tonnage but to each category, though here again Germany reserved the right, while not exceeding the ratio in total tonnage, to build up to 45 per cent of the British tonnage in submarines.

France immediately informed the British government that she no longer regarded herself bound by naval treaty ratios, and that in the new conditions France must consider naval increases. The situation was not improved when Minister Eden

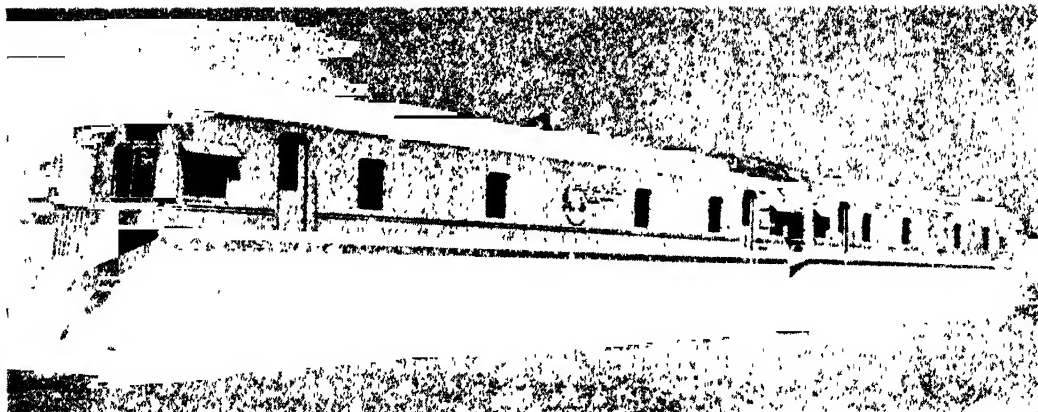


Globe Photo

THE LONDON NAVAL CONFERENCE

Delegations of the United States, Great Britain, Japan, France and Italy assembled in the Locarno Room of the London Foreign Office for the opening ceremony on Dec. 9, 1935

NAVAL PROGRESS



Courtesy of General Electric Company

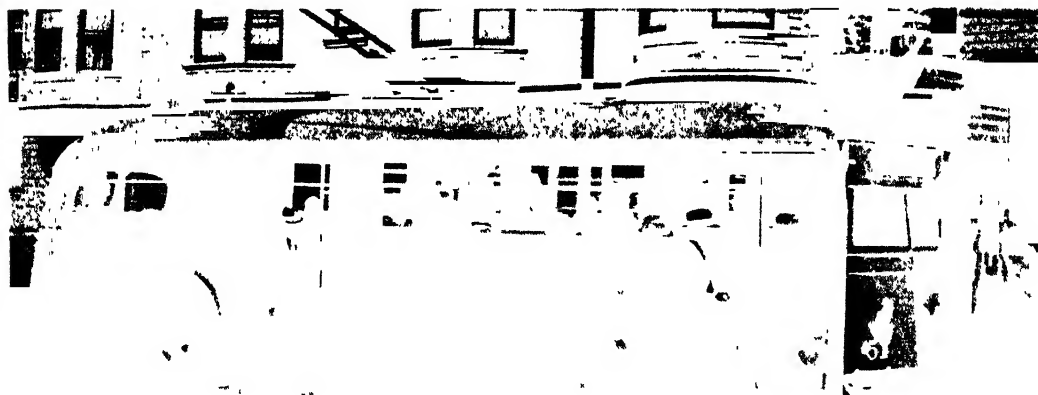
DIESEL-ELECTRIC LOCOMOTIVE

New 3600-horse-power engine built for the Atchison, Topeka & Santa Fe Railway



Courtesy of General Electric Company

ALL-SERVICE BUS



Courtesy of General Electric Company

TROLLEY COACH

ELECTRIC TRANSPORTATION

found himself obliged to deny France information as to the details of the future German naval programmes. These had been indicated to the British Admiralty, but with the understanding that they would not be divulged to France until that nation came forward with her own plans. This naval rapprochement with Germany undoubtedly brought Italy and France closer together. Among the Baltic States, particularly Poland and the U.S.S.R., there immediately developed strong agitation for naval increases; but no positive action was taken to offset the new German Navy.

In a strictly technical sense, the most important development of the year was the general realization that after a long holiday capital ships were again being constructed and that every indication pointed to an ever increasing number of such ships being laid down. In 1921 the builders' efforts were concentrated on means for providing armor to stop 16-inch shell, for compartmentation to neutralize the effect of torpedo or bomb, and other such problems for 30,000 or 40,000-ton ships. After the treaty of 1922, the cruisers and torpedo craft absorbed the attention of designers and builders—electric welding, superheated and high pressure steam, corrosion resisting steel, stowage and launching of aircraft were matters to be considered in saving weight and resulted incidentally in increasing the cost of 10,000-ton men-of-war to \$1500 and more per ton.

In December, 1932, when France laid down the *Dunkerque* of 26,500 tons to carry eight 13-inch guns in two turrets and to make 29.5 knots, a new era in capital ship construction had begun. The *Strasbourg*, a sister ship, was not laid down until two years later, and since then approval had been given to build two 35,000-ton ships to offset the *Littorio* and the *Vittorio Veneto* which the Italians laid down in 1934. After conclusion of the agreement with Great Britain, the Germans were prompt to commence work on two 26,000-ton ships.

The three leading naval powers were forbidden by treaty to lay down any capital ships before the end of 1936, but when the London Naval Treaty was signed each power already had several such ships over age and most of the others were approaching the limit of usefulness. Plans and specifications were being drawn in office and drafting room, and even should the present age limit be extended by treaty the time was virtually at hand when the building of many powerful heavily armed ships would be under way in all parts of the world.

There was a general recognition of the fact that aircraft had not made battleships obsolete, but that, on the contrary, they remained the basis of national defense. The most marked differences between the new battleships and the old promised to be increased speed—30 knots or more; more powerful anti-aircraft batteries; greater deck protection; and improved provisions for damage control.

COMPARATIVE DATA—NAVIES OF THE WORLD

	Total built		Total built under age 1935		Building and appropriated for		Additional allowed, by treaty, laid down before Dec. 31, 1936
	No.	Tons	No.	Tons	No.	Tons	
United States*							
Capital Ships . . .	15	464,300	12	384,200	..	..	000
Aircraft Carriers . .	4	92,000	3	80,500	3	54,500	000
Cruisers (8" guns) . .	16	149,775	15	142,425	3	30,000	000
Cruisers (6" guns) . .	10	70,500	10	70,500	9	90,000	000
Destroyers	213	241,105	8	11,075	53	84,050	51,975
Submarines	84	70,020	39	42,210	16	21,900	18,860
Total	342	1,087,700	87	730,910	84	280,450	70,835
British Empire*							
Capital Ships	15	474,750	12	381,450	..	....	000
Aircraft Carriers . .	6	115,350	6	115,350	1	22,000	12,100*
Cruisers (8" guns) . .	19	183,396	17	163,600	..	....	000
Cruisers (6" guns) . .	36	183,480	15	91,360	12	96,400	28,290
Destroyers	170	199,229	59	80,014	27	36,715	39,396
Submarines	57	56,879	37	45,624	9	10,235	4,081
Total	303	1,213,084	146	877,398	49	165,350	83,867
Japan*							
Capital Ships	9	272,070	5	154,750	..	.....	000
Aircraft Carriers . .	4	68,370	4	68,370	2	20,050	50
Cruisers (8" guns) . .	14	123,520	12	107,800	..	.....	000
Cruisers (6" guns) . .	22	110,375	17	91,995	4	34,000	000
Destroyers	102	123,313	62	85,443	20	28,957	1,500*
Submarines	60	72,349	48	62,431	10	13,700	528
Total	211	769,997	148	570,789	36	96,707	2,078
France							
Capital Ships	9	185,925	2	44,378	4	123,000	52,000
Aircraft Carriers . .	1	22,146	1	22,146	..	.....	37,854
Cruisers (8" guns) . .	10	105,923	7	70,000	..	.....	Not limited
Cruisers (6" guns) . .	9	59,414	7	46,502	5	38,000	Not limited
Destroyers	81	125,788	57	108,000	17	17,866	Not limited
Submarines	99	86,648	70	66,631	12	11,798	Not limited
Total	209	585,844	144	357,657	38	190,664	
Italy*							
Capital Ships	4	86,532	1	21,555	2	70,000	105,000
Aircraft Carriers . .	..	.....	..	.....	..	.....	60,000
Cruisers (8" guns) . .	11	103,641	7	70,000	..	.....	Not limited
Cruisers (6" guns) . .	17	77,974	13	65,858	2	15,748	Not limited
Destroyers	88	91,488	50	61,647	12	12,480	Not limited
Submarines	69	45,720	48	37,550	18	14,827	Not limited
Total	189	405,355	119	256,610	34	113,055	
Germany:							
Capital Ships	8	98,084	2	20,000	3	62,000	By agreement with
Aircraft Carriers . .	..	.....	..	.....	..	.....	British Empire
Cruisers (8" guns) . .	..	.....	..	.....	2	20,000	limited to 35% of
Cruisers (6" guns) . .	9	46,040	6	36,000	..	.....	aggregate ton-
Destroyers	32	23,091	12	9,600	16	26,000	nage of all ships
Submarines	12	3,000	12	3,000	16	6,500	of British Empire
Total	61	170,215	32	68,600	37	114,500	

* May replace *Furious*, *Eagle*, and *Hermes* (experimental ships). * Available to replace *Miyuki* sunk during 1934.

With the construction of new high speed battleships an accepted fact, naval authorities agreed that the day of the 10,000-ton, 8-inch cruiser was over. Such ships were deemed needlessly large for escort duty; and though not too large for fleet work their design was unsatisfactory for operations in a fleet with a battle line that might move at a speed nearer 30 knots than 20 knots. These cruisers with their heavy armament were valuable adjuncts of fleets as circumscribed as were those in existence under the Washington and London treaties; but their weak, shell-like hulls made them very vulnerable to enemy attacks, and no great power contemplated adding to the number already provided for.

The great powers unable to build new capital ships had expended immense sums modernizing those they had; but, at best, these modernized vessels would be definitely inferior to the new ships that were under construction in France, Italy, and Germany. The most significant features of the modernization work had been the installation of catapults, anti-aircraft batteries, and an increased amount of horizontal armor.

The tabulation on page 475 shows comparative data of the navies of the world in 1935. (See *Naval Progress, YEAR BOOK 1934* for construction each year since 1922.)

Argentina. One cruiser was ordered in England, approximate cost \$5,000,000. The unrest and mutinous spirit of a few years ago was completely under control; a plot by an ex-officer and some 20 men in Buenos Aires to seize a cruiser in the harbor was foiled and apparently had little if any support in the ship. American naval officers were assisting in the development of a naval war college. Progress in naval aviation was noted.

Australia. The budget for 1936 of about \$9,000,000 was a million dollars greater than for the preceding year. Personnel was increased from 3250 to 4100 including an increase of 38 officers. The naval reserve amounted to over 5000 men. Two sloops *Yarra* and *Swan* were to be built in Sydney.

Brazil. The new building programme included 2 cruisers, 10 destroyers, 6 submarines, and a number of auxiliaries. Nine of the destroyers were building in England; and a contract was let for construction of 6 submarines and 1 tanker in Italy. Payments were to be made in exports from Brazil to Italy.

China. Captain Morse, D.S.O., from the Operations Division of the Naval Staff of the British Admiralty was appointed head of the naval mission assisting in the reorganization of the naval forces. The cruiser *Ning Hai* built in Japan was the most modern ship in the fleet. A sister ship *Ping Hai* was laid down in Shanghai in 1931 but work was suspended in 1933. Construction was again undertaken in 1935 under supervision of Japanese engineers, and machinery and armament was being built in Japan. All work was to be completed in two years, total cost \$8,000,000. Characteristics, 2500 tons, 6 5.5-inch guns, 4 tubes, 2 A.A. guns, 1 plane; complement, 340 men. A naval academy in charge of two Japanese instructors was started at Futschau.

Denmark. Of the naval budget of 21,551,741 crowns, 1,665,000 was for new construction and 995,000 was for the naval air service. The destroyer *Ornen* was delivered, and satisfactory progress was reported on two 300-ton submarines building at the Copenhagen Navy Yard.

Estonia. Four destroyers were projected but details were not announced; two submarines or-

dered from Vickers were to have 620 tons surface displacement, 13.5 knots surface, 8.5 knots submerged. Total naval personnel was 1600.

Finland. Interest in the new submarine *Saukko* was largely due to reports that she was built from German plans, and that her single high speed engine with reduction gear was actually an experimental engine designed to be used in submarines later built in Germany.

France. The naval estimates for 1935 totaled 2903 million francs—an increase of 24 million over the revised 1934 figures. The budget presented in December for the next year amounted to only 1547 million francs, but actually for the purposes that those estimates covered there was considerable increase over 1935. The shipbuilding expenditures were to come from special credits; and an extraordinary armaments budget for national defense had already been noted. The long struggle of the Minister of Marine to gain full control of aviation in the Navy met with some measure of success. An aeronautical section was formed that had control of types of planes for naval usage, procurement, and upkeep although personnel matters largely remained with the Air Ministry. At sea there were about 30 planes in carriers, 25 in combatant vessels, and 20 served by a tender. A plane with folding wings was tried out on the super-submarine *Surcouf*.

In recent years the French developed two new types of vessels. The "Avisos" or dispatch boats, intended for service in the colonies and provided for comfort in the tropics, had hulls somewhat similar to flotilla leaders with an added platform over the main deck for protection from sun and rain. Tonnage 2000—dimensions 340' x 42' x 12'—speed 15 knots—radius 9000 miles—3 5.5-inch broadside guns and 4 small A.A. guns. The "Escorteurs de convois" were designed for the convoy duty which was such an important part of French naval plans. Tonnage 600—dimensions 265' x 25' x 10'—speed 35 knots, radius 700 miles at full speed; 2 3.9-inch guns, 4 1.5-inch A.A. guns, 4 torpedo tubes. The

FRANCE: WARSHIPS BUILDING OR APPROPRIATED FOR, 1935

Class and name	Laid down	Standard displacement	Speed
Capital Ships:			
<i>Dunkerque</i>	1932	26,500	29.5
<i>Strasbourg</i>	1934	26,500	29.5
<i>France</i>		35,000	30
<i>Verdun</i>		35,000	30
Light Cruisers:			
<i>La Calissonniere</i>	1931	7,600	31
<i>Jean-de-Vienne</i>	1931	7,600	31
<i>Marseillaise</i>	1933	7,600	31
<i>Gloire</i>	1933	7,600	31
<i>Montcalm</i>	1934	7,600	31
<i>Georges Leygues</i>	1933	7,600	31
Destroyers:			
<i>Fleuret</i>	No	1,700	
<i>Malin</i>	1931	2,569	37
<i>Ebee</i>	No	1,700	
<i>Hardi</i>	1935	1,378	
<i>Magador</i>	1934	2,884	
<i>Volta</i>	1934	2,884	
Twelve escorteurs of 600 tons each building.			
Submarines:			
<i>Tonnant</i>	1930	1,379	17
<i>Iris</i>	1931	571	14
<i>Venus</i>	1931	571	14
<i>Junon</i>	1931	571	14
<i>Minerve</i>	1931	571	14
<i>Perle</i> (mine layer)	1931	669	12
<i>Casablanca</i>	1931	1,379	17
<i>Sfax</i>	1932	1,379	17
<i>Sidi-Ferruch</i>	1932	1,379	17
<i>Ouessant</i>	1932	1,379	17
<i>Beveziers</i>	1932	1,379	17
<i>Agosta</i>	1931	1,379	17
<i>Roland-Morillot</i>	1935	1,379	
<i>Aurore</i>		571	

2 new 35,000-ton battleships were to carry 12 13-inch guns and to have a speed of 30 knots. As with the *Dunkerque* they were to be built in a dock shorter than the ship, floated out, and the bow added afterwards. When the *Lorraine* was modernized the centre turret was replaced by a catapult and provision was made for stowage of two observation planes. A few destroyers and submarines were the only ships completed during the year. Important vessels under construction or appropriated for are listed in the accompanying table.

Great Britain. The naval estimates for 1935 amounted to £60,050,000 which was an increase over 1934 of £3,500,000. Of this increase about £250,000 was for speeding up new construction, £500,000 was for increase in the fleet air arm, and £2,500,000 in connection with the modernization programme. Provision was made for 95,000 personnel, an increase of 2000 over the preceding year, which had in turn increased 2000 over the year before that. The new construction programme called for 3 cruisers, 1 leader, and 8 destroyers, 3 submarines, 4 sloops, and various auxiliary vessels.

Despite the increase in personnel provided for in the budget it was announced in November that the authorized number had been exceeded and it was stated that supplementary estimates for that action as well as for other emergency measures would be submitted to Parliament. These increases were generally taken to be the result of operations in the Mediterranean. While no general change in the organization of the naval forces was made, the movement of vessels showed that a great part of the Home Fleet, including the heaviest ships, was sent to supplement the Mediterranean Fleet during the latter part of the year when the relations with Italy were strained.

The new ships, cruisers, destroyers, submarines, and auxiliaries delivered from the builders were all reported as typically excellent British ships with no marked or startling innovations. It was noted that an ever increasing number of ships carried aircraft and that multi-barreled anti-aircraft guns were being generally installed. Details regarding these guns were lacking but it was known that the rate of fire was extremely high.

The modernization programme for heavy ships continued, the *Repulse*, *Royal Oak*, *Malaya*, *Warspile*, and *Renown* being in the dockyards for that purpose. In September the keel was laid for a new aircraft carrier, the *Ark Royal*. Her probable time of completion was 1938. This was the first carrier laid down by the British since completion of the *Glorious* in 1930. It was expected that her general characteristics would be somewhat similar to those of the *Courageous*, although her tonnage was listed as 14,000 as against 25,500 for the latter; and the probable number of planes was given as 60 in comparison with 42. None of the British carriers was prepared to care for as many planes as are planned for in the American and Japanese carriers. Incidentally Great Britain had never seen fit to replace any of the carriers, *Furious*, *Eagle*, *Hermes*, or *Argus* listed as experimental ships and which she had ample authority to replace under the terms of existing treaties.

That country apparently was more concerned over deficiencies in other types. While conforming strictly to existing treaty provisions she let it be understood that with the expiration of the treaties in 1936 she expected to increase her cruiser strength to a point that she regarded as commensurate with her needs, and in the preliminaries of the limitation of armaments conference she inti-

mated that even during 1936 it might be necessary to invoke the so-called "escalator" clause which would entitle her to build above the treaty quota to offset the naval expansion of non-treaty powers. The specific object of such action would be to retain overage cruisers and destroyers that would otherwise have to be scrapped during 1936.

Mr. Baldwin indicated that a general rearmament programme would have to be undertaken and authorities estimated the cost as approximately one and a half billion dollars. The most costly items would be for replacement of battleships which might come to near forty million dollars each. Estimates showed that a prewar cost of about £115 per ton had increased to £216 or more. Important vessels under construction or appropriated for are listed in the accompanying table.

GREAT BRITAIN: WARSHIPS BUILDING OR APPROPRIATED FOR, 1935

Class and name	Laid down	Standard displacement	Speed
Aircraft Carrier:			
<i>Ark Royal</i>	1935	14,000	
Light Cruisers.			
<i>Amphion</i>	1933	7,000	33
<i>Arethusa</i>	1933	5,200	33
<i>Penelope</i>	1934	5,200	32
<i>Apollo</i>	1933	7,000	33
<i>Newcastle</i>	1934	9,000	
<i>Southampton</i>	1934	9,000	
<i>Aurora</i>		5,200	
<i>Birmingham</i>	No	9,000	
<i>Glasgow</i>	1935	9,000	
<i>Sheffield</i>	1935	9,000	
<i>Liverpool</i>	No	9,000	
<i>Manchester</i>	No	9,000	
<i>Gloucester</i>	No	9,000	
Destroyers			
<i>Faulknor</i> (DL)	1933	1,475	36
<i>Greenville</i> (DL)	1934	1,400	36
<i>Greyhound</i>	1934	1,350	35
<i>Griffin</i>	1934	1,350	35
<i>Garland</i>	1934	1,350	35
<i>Gallant</i>	1934	1,350	35
<i>Gypsy</i>	1934	1,350	35
<i>Grenade</i>	1934	1,350	35
<i>Grafton</i>	1934	1,375	35
<i>Glowworm</i>	1934	1,375	35
<i>Foresight</i>	1934	1,375	35
<i>Foxhound</i>	1933	1,375	35
<i>Fortune</i>	1933	1,375	35
<i>Fury</i>	1933	1,375	35
<i>Fame</i>	1933	1,375	35
<i>Firedrake</i>		1,375	35
<i>Hardy</i>	1935	1,400	36
<i>Hero</i>	1935	1,350	
<i>Hereward</i>	1935	1,350	
<i>Hasty</i>	1935	1,350	
<i>Havock</i>	1935	1,350	
<i>Hostile</i>	1935	1,350	
<i>Hotspur</i>	1935	1,350	
<i>Hunter</i>	1935	1,350	
<i>Hyperson</i>	1935	1,350	
1 leader and 8 others appropriated for			
Submarines:			
<i>Grampus</i> (mine layer)	1934	1,500	
<i>Snapper</i>	1933	670	14
<i>Narwhal</i> (mine layer)	1934	1,520	
<i>Seawolf</i>	1934	670	14
<i>Spearfish</i>		670	
<i>Sunfish</i>		670	
<i>Rorqua</i> (mine layer)	1935	1,520	
<i>Triton</i>		1,520	
<i>Cachalot</i>		1,475	
<i>Sierlet</i>		670	

Germany. Unquestionably the most sensational naval event of the year was the renaissance of German sea power. For the preceding four years the reported naval expenditures approximated 190 million RM each year, and the personnel had gradually increased to 1600 officers and something over 30,000 men. With a definite abandonment of the restrictive naval provisos of the Versailles Treaty, and after reaching an understanding with Great Britain, Germany announced that her current building programme included 2 26,000-ton battle-

ships, 2 10,000-ton heavy cruisers, 16 destroyers, and 28 submarines. (The Versailles Treaty had particularly forbidden submarines to Germany and British acquiescence to this particular part of the programme occasioned general surprise.) The two battleships were to make 30 knots, and were to be driven by geared turbines rather than by Diesel engines. The armament was to be 9 or 12 11-inch guns, mounted in 3 or 4 triple turrets, 12 5.9-inch guns in the secondary battery, and 6 4.1-inch A.A. guns. They would carry 2 observation planes. Armor would be 9" side, and thick protective deck. The relatively light big guns caused much surprise, and clearly indicated the German preference for a high rate of fire to a heavier weight of metal in a salvo. The new 10,000-ton cruisers were to make 33 knots, carry 8 8-inch guns and 8 4.1-inch guns, and 3-pounders for A.A. battery. The destroyers were to be of 1625 tons, 36 knots, mount quadruple tubes, and carry five 5-inch guns of a new and improved type. Germany also built a number of patrol vessels of the so-called F-type that were somewhat similar to and an answer to the French *escorteurs* heretofore mentioned.

The new cruiser *Nurnberg*, last of the group to be constructed under the Versailles treaty provisions, was finished in November. Of 6000 tons with 9 5.9-inch guns, 4 3.4-inch A.A. guns, and 12 torpedo tubes she was not unlike the *Leipzig* completed four years before. The *Admiral Graf Spee*, third and last of the vestpocket battleships, was completed. A number of small submarines were put into service.

Greece. The government adopted a construction programme that called for 12 destroyers of 1000 tons each or less and 2 submarines. The building was to be spread over a five-year period, but no contracts were announced for the 4 destroyers and 2 submarines that were to be started in foreign yards in 1935. As the cruiser *Averoff* had been damaged by the Reds during the Venizelist uprising the *Helle* was sent to bring the king home.

Italy. The various decrees regarding naval and other expenditures caused considerable public confusion as to just what amounts were being spent on the Italian Navy. The amounts were unquestionably large as was evidenced by a decree in October allocating 414,000,000 lire additional for new construction, apportioned as follows: 1935-36 budget—285,000,000; 1936-37 budget—103,000,000; and 1937-38 budget—26,000,000; and another decree the same month setting aside 327,000,000 lire for constructing and filling new oil storage depots. Last reliable reports set the personnel of the Navy at 3000 officers and 50,000 men but that number might well have been exceeded in anticipation of a possible clash with the British Fleet.

The battleships *Giulio Cesare* and *Conte di Cavour* laid down in 1910 and completed in 1915 finished an extensive modernization. Their original tonnage was 22,000. They were extensively re-armored and regunned, substantial alteration was made to propelling machinery, and their speed increased from 22 to 26 knots. Modernization of two newer ships *Andrea Doria* and *Caio-Dulio* was in progress but had not been completed. At Naples a new dry dock was under construction to take care of the 35,000-ton battleships when completed. Its cost was reported as 50,000,000 lire. In addition, 4 floating dry docks were building, 2 of 1000 tons each; 1 of 1600 tons; and the fourth of 7500 tons. The building programme for the current year was 2 1600-ton destroyers, 2 615-ton torpedo boats,

1 2000-ton colonial dispatch boat, one 908-ton escort vessel, 1 56-ton torpedo boat.

In addition, the General Board recommended construction of 10 600-ton submarines; but final action was not taken on this recommendation which, if adopted, would bring Italy's tonnage of modern submarines up to 52,700 tons.

The naval air arm which was part of the Italian Air Force was strengthened and modernized. The number of planes on each battleship and cruiser was being increased to four. The 24 bomber and reconnaissance squadrons attached to the Navy were being increased to 30 squadrons with a total strength of 270 machines. An experimental Savoia flying boat was reported as carrying two 18-inch torpedoes. Important vessels under construction or appropriated for are listed in the accompanying table.

ITALY: WARSHIPS BUILDING OR APPROPRIATED FOR, 1935

Class and name	Laid down	Standard displacement	Speed
Capital Ships.			
<i>Littorio</i>	1934	35,000	
<i>Vittorio Veneto</i>	1934	35,000	
Light Cruisers:			
<i>Eugenio di Savoia</i>	1932	6,797	36.5
<i>Garibaldi</i>	1933	7,874	35
<i>Duca Abruzzi</i>	1933	7,874	35
Destroyers:			
<i>Centaurio</i>	1934	615	34
<i>Chimene</i>	1934	615	34
<i>Orsa</i>		855	34
<i>Orione</i>		855	34
<i>Procyone</i>		855	34
<i>Pegaso</i>		855	34
<i>x</i>		1,449	
<i>y</i>		1,449	
Submarines:			
<i>Pietro Micca</i>	1931	1,371	15
<i>Pietro Calvi</i>	1931	1,332	17
<i>Giuseppe Fanzani</i>	1931	1,332	17
<i>Glauco</i>	1931	860	17
<i>Enrico Tazzoli</i>	1932	1,332	17
<i>Otaria</i>	1931	860	17
<i>ML-1</i>		915	
<i>ML-2</i>		915	

Japan. The naval budget for 1934-35 was finally fixed at 530,193,000 yen out of a total military budget of 1,021,470,000 yen which was 47 per cent of the total national budget. A slight increase of all these figures was expected for the next year, the total for the Navy approximating 552,000,000 yen. The number of officers and men was not fixed by legislation but by the naval authorities; the number in service was 101,460 of whom approximately 10,000 were officers.

Modernization work was proceeding apace in the battleships *Mutsu* and *Nagato*, the battle cruiser *Kongo*, and the aircraft carrier *Kaga*. The new cruisers *Mogami* and *Mikuma* joined the fleet late in the year. Their main battery of 15 6.1-inch guns was supplemented by 2 5-inch A.A. guns and 12 torpedo tubes. Speed was reported as 32 knots. In these ships, as in Japanese men-of-war in general, maximum armament was obtained at a sacrifice of cruising radius; and, in the opinion of many foreign authorities, at the expense of a certain degree of stability and seaworthiness. Their ships had narrow beam, light draft, light armor, heavy armament, and a very considerable amount of top hamper. This top hamper to mount searchlights, range finders, fire control installations, and the like would prove an excellent target for enemy gunners and in these sensitive ships might tend to reduce the steadiness of the gun platforms in bad weather, or during turns. The living conditions on board Japanese ships were markedly inferior to those on American and British vessels. The Japanese con-

structed an extraordinarily small submarine 36 feet long by 6 feet wide propelled on the surface by a 25 h.p. gas engine, and submerged by a 12 kw. motor. Its trial crew was four men. It was reported that it could stay submerged but four hours and that the maximum safe depth of submergence was 200 feet. The goal of naval air strength to be reached by 1936 was 1300 planes. There were approximately 800 in service at the beginning of the year. It should be remembered that in Japan as in the United States the naval air arm was under exclusive naval jurisdiction. Important vessels under construction or appropriated for are listed in the accompanying table.

JAPAN: WARSHIPS BUILDING OR APPROPRIATED FOR, 1935

Class and name	Laid down	Standard displacement	Speed
Aircraft Carriers:			
<i>Soryu</i>	1934	10,050 (est.)	
	No	10,050 (est.)	
Light Cruisers:			
<i>Suzuya</i>	1933	8,500	33
<i>Kumano</i>	1934	8,500	
<i>Tone</i>	1934	8,500	
	No	10,000	
Destroyers			
<i>Shiratsuyu</i>	1933	1,368	
<i>Shigure</i>	1933	1,368	
<i>Yudachi</i>	1934		
<i>Samidore</i>	1934	1,368	
<i>Harusame</i>	1935	1,368	
<i>Umisake</i>	1935	1,368	
<i>Murasame</i>	1934	1,368	
<i>Kawakaze</i>	1935		
Twelve others of 1,500 tons each and 8 of 527 tons each.			
Mine Layer:			
<i>Natsushima</i>			
Submarines:			
<i>I-69</i>	1931	1,400	
<i>I-6</i>	1932	1,900	
<i>I-70</i>	1933	1,400	
<i>I-71</i>	1933	1,400	
<i>I-72</i>	1933	1,400	
<i>I-73</i>	1934	1,400	
<i>RO-33</i>	1933	700	
<i>RO-34</i>	1934	700	
<i>I-7</i>	1934	1,950	
<i>I-8</i>	1934	1,950	
<i>I-74</i>	1934	1,400	
<i>I-75</i>	1934	1,400	
		700	

Netherlands. A special committee on the composition of the East Indies fleet recommended 12 destroyers, 18 submarines, and 54 seaplanes. A minority recommended the continued maintenance of 3 cruisers that had hitherto been the dominant part of that force. The cruiser *De Ruyter* launched in May was to be a replacement in that force. In view of the committee reports this might be the last cruiser built for that purpose. The naval seaplanes were reported as very successful in cooperation with warships in the suppression of piracy in certain parts of the Dutch East Indies.

Norway. The estimates of 11,561,700 kroner were nearly one million greater than for the preceding year. About one-fourth of the amount was for building 2 torpedo boats and 2 gunboats. The 2 destroyers building at the Horten Navy Yard were being electric welded, would carry three 10-cm guns and make 30 knots.

Poland. Two 2000-ton destroyers were ordered in England; a mine layer of 2250 tons was building in Havre; and the six projected submarines were not ordered. The mine sweeper *Jaskolka*, the first man-of-war built in Poland, was placed in commission.

Portugal. In March, Lisbon announced a second construction programme of 5 destroyers and 3 submarines to be completed by 1939. This was in addition to the first programme of 14 ships under-

taken several years ago. It was reported that the new submarine *Delfin* had been rejected by the government until the builders brought her up to specifications in certain particulars. It was probable that others building would also have to be altered before acceptance.

Siam. The navy of Siam continued its rapid growth. In 1935 it had 352 officers and 4726 men. Four 370-ton submarines, the first for this country, were ordered from Japan at a cost of \$400,000 each, exclusive of armament. In addition to 2 torpedo boats already building a contract was signed for 8 torpedo boats and 2 mine boats to be built in Italy.

Spain. The new destroyer, *Almirante Antequera*, was placed in service in May, 1676 tons, 36 knots, 5 120-mm guns, 2 triple tubes. The government announced a \$65,000,000 five-year building programme. This was partially for defense of the Balearic Isles, and partially to aid unemployment. It included 10 400-ton submarines, 12 800-ton torpedo boats, 12 200-ton motor boats, 12 50-ton torpedo launches, and 12 other small craft.

Sweden. The 1935-36 estimates called for 39,666,000 kronor, an increase of four million over the last year, which was in turn an increase of four million over the preceding one. Considerable additional credits were made available in 1936 for overhaul of ships, for construction of two new destroyers, and for coast defense. A commission that had been studying the defense system for some years recommended a gradual abolition of capital ships and a concentration on light vessels and aircraft; the unification of defense command under a single general staff; and other measures to strengthen the land forces.

Union of Soviet Socialist Republics (Russia). The defense budget had mounted year by year and in 1935 exceeded one and one-half billion rubles but details regarding the navy were uncertain. A report from Oslo credited 4 cruisers, 7 submarines, and 3 gunboats with being under construction. Government papers announced that since 1931 there had been 1100 per cent increase in the coast guard fleet, 435 per cent in submarines, and 370 per cent in destroyers. It was reported that the keel of the sixtieth submarine was laid in the summer and that 10 more were placed on order. These were believed to be of about 800 tons—15 knot surface speed, 7000 miles cruising radius, carrying one 102-mm gun, and a large number of torpedo tubes. The submarine B-3 built in 1917 had a collision in Finland Bay and was lost with all hands.

United States. The appropriation act for the fiscal year 1936 provided \$457,805,211. Of this amount about \$100,000,000 was for shipbuilding including about \$20,000,000 for starting work on 24 new vessels that were not all laid down by the end of the year. An increase of the officer strength of the line of the Navy from 5499 to 6531 was authorized but officials estimated that it would be 10 years before the Naval Academy output would bring the officer strength up to the latter figure. An increase of enlisted strength to 95,000 was authorized and it was anticipated that the number would be further increased from year to year as new ships joined the fleet. In view of the rapid expansion in the naval air force and the difficulty in supplying pilots immediately, provision was made for training and employing young reserve officers on active duty for several years.

Substantial progress was made in providing for orderly increase in the strength of the Navy as contemplated by the Trammel-Vinson Act ap-

proved March, 1934. This Act authorized construction of vessels and aircraft to bring the Navy to the full strength allowed in the various categories limited by the treaties of Washington and London. With passage of the above mentioned appropriation act provision was made for starting work on all ships authorized by treaty except 35 destroyers and 14 submarines. It was expected that these would be asked for in future years, together with additional replacement construction as necessary to retire overage ships. In addition, the Navy Department drew up a 10-year programme for building necessary auxiliary vessels for the larger navy, that was to be presented to the next Congress. During the fiscal year 1935 there were 306 ships maintained in commission and operated at sea. The number included 15 battleships, 15 heavy cruisers, 10 light cruisers, 105 destroyers, 54 submarines, 4 aircraft carriers, 1 mine layer, 4 light mine layers, 13 patrol vessels, 83 auxiliaries; and, in addition, 156 small craft were operated for inshore work. There were 974 service aeroplanes on hand and 472 more on order.

On the night of February 12 the U.S.S. *Macon*, the only serviceable dirigible in America, was lost at sea while participating in fleet exercises. An investigation placed the cause of the casualty as a structural failure. The ship sank off the coast of California. All but two of her crew were rescued by vessels of the fleet.

In the spring, the entire fleet participated in one of the most extensive strategical and tactical problems ever attempted. The operating area included the Pacific Coast, the Aleutian Islands, the Hawaiian Islands as far west as Midway Island, and all the intervening ocean. Extensive use was made of submarines and aircraft and valuable information was obtained both as to their possibilities and limitations. Approximately 400 naval planes participated in the exercise and as a part of it 43 patrol planes flew in a massed flight from Pearl Harbor to Midway and there based on tenders while operating. Virtually the entire fleet entered Pearl Harbor to test the facilities of that place as a base.

As a part of the general development of national defense the Navy was actively engaged in the development of strategic naval bases in the Pacific, especially those in the Hawaiian Islands. Among the most important projects was a floating dry dock to cost \$10,000,000 capable of docking the largest vessels in the Navy. It was scheduled to operate normally at Pearl Harbor but might be used anywhere that sufficient depth of water for its operation could be found.

A detailed study was made of the organization and administration of the Naval Reserve and steps were initiated both to increase the size and to increase the amount of active duty training for most groups.

When the *New Mexico* and *Idaho* rejoined the fleet the original modernization programme was completed but the Navy Department was about to embark on a new one to strengthen the fleet. This included new fire control installations in the *Tennessee* and the *California*, and extensive improvements in the damage control equipment of those ships. The *Lexington* and *Saratoga* were to be brought up to date although complete details as to their requirements were lacking. Aside from improvement in damage control installations the facilities for handling planes were to be modified to take advantage of experiences of recent years, and to more nearly conform with the modern equipment being placed in the *Yorktown* and *Enterprise*.

Certain other vessels were to be improved, but no funds were to be spent on modernization of the smaller craft as they were all new or too old to justify any extensive expenditures.

Destroyers and submarines were the only important ships completed during the year. The former were of a new type but they were operating too short a time for conclusions to be drawn as to the extent of their superiority over the World War

UNITED STATES WARSHIPS BUILDING OR APPROPRIATED FOR, 1935

Class and name	Last down	Standard displacement	Speed
Aircraft Carriers:			
<i>Yorktown</i>	1934	10,000	
<i>Enterprise</i>	1934	10,000	
Heavy Cruisers:			
<i>Quincy</i>	1933	10,000	32.5
<i>Vincennes</i>	1934	10,000	32.5
<i>Wichita</i>	1935	10,000	
Light Cruisers:			
<i>Brooklyn</i>	1935	10,000	32.5
<i>Philadelphia</i>	1935	10,000	32.5
<i>Savannah</i>	1934	10,000	32.5
<i>Nashville</i>	1935	10,000	32.5
<i>Honolulu</i>	1935	10,000	
<i>St. Louis</i>	No	10,000	
<i>Phoenix</i>	1935	10,000	
<i>Helen</i>	No	10,000	
<i>Roose</i>	1935	10,000	
Submarines:			
<i>Porpoise</i>	1933	1,300	
<i>Pike</i>	1933	1,300	
<i>Shark</i>	1933	1,300	
<i>Tarpon</i>	1933	1,300	
<i>Plunger</i>	1935	1,300	
<i>Permit</i>	1935	1,300	
<i>Pollack</i>	1935	1,300	
<i>Perch</i>	1935	1,300	
<i>Pickrel</i>	1935	1,300	
<i>Pompano</i>		1,300	
<i>Salmon</i>			
<i>Seal</i>			
<i>Skipjack</i>			
<i>Snapper</i>			
<i>Stingray</i>			
<i>Sturgeon</i>			
Destroyers:			
<i>Porter</i>	1933	1,500	
<i>Selfridge</i>	1933	1,850	
<i>McDougal</i>	1933	1,850	
<i>Winslow</i>	1933	1,850	
<i>Phelps</i>	1934	1,850	
<i>Clark</i>	1934	1,850	
<i>Moffett</i>	1934	1,850	
<i>Balch</i>	1934	1,850	
<i>Somers</i>	1935	1,850	
<i>Wainwright</i>	1935	1,850	
<i>394</i>	No	1,850	
<i>395</i>	No	1,850	
<i>396</i>	No	1,850	
<i>Mahan</i>	1934	1,500	
<i>Cummings</i>	1934	1,500	
<i>Drayton</i>	1934	1,500	
<i>Lamson</i>	1934	1,500	
<i>Flusser</i>	1934	1,500	
<i>Reid</i>	1934	1,500	
<i>Case</i>	1934	1,500	
<i>Conyngham</i>	1934	1,500	
<i>Cassin</i>	1934	1,500	
<i>Shaw</i>	1934	1,500	
<i>Tucker</i>	1934	1,500	
<i>Downes</i>	1934	1,500	
<i>Cushing</i>	1934	1,500	
<i>Perkins</i>	1934	1,500	
<i>Smith</i>	1934	1,500	
<i>Preston</i>	1934	1,500	
<i>Gridley</i>	1935	1,500	
<i>Craven</i>	1935	1,500	
<i>Dunlap</i>	1935	1,500	
<i>Fanning</i>	1935	1,500	
<i>Bagley</i>	1935	1,500	
<i>Blue</i>	1935	1,500	
<i>Helm</i>	1935	1,500	
<i>Mugford</i>	1935	1,500	
<i>Ralph Talbot</i>	1935	1,500	
<i>Henley</i>	1935	1,500	
<i>Patterson</i>	1935	1,500	
<i>Jarvis</i>	1935	1,500	
Twelve others of 1,500 tons each.			
Gunboats:			
<i>Erie</i>	1934		
<i>Charleston</i>	1934		

type. The heavy cruiser *Quincy* was due for delivery, but she was twice delayed before leaving the builders' hands; a fire during the summer did extensive damage and later a test of important machinery resulted in serious injury from a loose bolt that got in the moving parts. Important vessels under construction or appropriated for are listed in the table on page 480.

Yugoslavia. Three new destroyers and a number of auxiliaries were being built in and for Yugoslavia by a French Company but the boilers and machinery were to be supplied by Yarrow at a cost of approximately \$1,500,000.

NAVIGATION. See SHIPBUILDING; SHIPPING; NAVAL PROGRESS; MARINE DISASTERS.

NAZARENE, CHURCH OF THE. Near the close of the 19th century, there developed a movement for the spread and conservation of scriptural holiness in organized church form in various parts of the United States. This movement was similar to that of the previous century, historically known as the Wesleyan revival. A closer affiliation of the several bodies in the United States culminated in the organization of the Pentecostal Church of the Nazarene in Chicago in October, 1907, by the union of the Church of the Nazarene, composed of 45 organizations mostly west of the Mississippi River, and the Association of the Pentecostal Churches of America, composed of 45 organizations east of the Mississippi River. In 1909 the Holiness Church of Christ, having 93 organizations, joined the merger. Ten years later the general assembly ordered the word "Pentecostal" dropped from the name.

In 1935 the Church of the Nazarene had attained a membership of 130,353, with 2254 organized churches. Of these 84 churches and 2704 members were in Canada and the British Isles. There were 2638 ordained and 1276 licensed ministers. The 2170 Sunday Bible schools had a total enrollment of 270,531. To the 1623 Young People's Societies belonged 56,964 members. The 741 Junior Societies had a membership of 17,505, and the 1923 Woman's Missionary Societies a membership of 37,452.

The general board has separate departments of foreign missions, home missions and evangelism, publication, ministerial relief, church schools, and education. Foreign missionary work is carried on in the Cape Verde Islands, South Africa, Palestine, Western India, China, Japan, Mexico, Central America, Peru, and Argentina. The department of education supervises its educational institutions: Eastern Nazarene College, Wollaston, Mass.; Olivet College, Olivet, Ill.; Southeastern Nazarene College, Nashville, Tenn.; Bethany-Peniel College, Bethany, Okla.; Bresee College, Hutchinson, Kans.; Pasadena College, Pasadena, Calif.; Northwestern Nazarene College, Nampa, Idaho; and Northern Bible College, Red Deer, Alberta. The department of publication issues the official periodical, the *Herald of Holiness*, through the Nazarene Publishing House in Kansas City, Mo.

The next meeting of the quadrennial general assembly will be held in June, 1936. There are 42 assembly districts. The general superintendents in 1935 were: The Rev. J. W. Goodwin, D.D.; the Rev. R. T. Williams, D.D.; the Rev. J. B. Chapman, D.D. The Rev. E. J. Fleming was general church secretary, and Mervel S. Lunn, general treasurer. Headquarters of the church are at 2923 Troost Avenue, Kansas City, Mo.

NAZIS. See AUSTRIA, CZECHOSLOVAKIA, DANZIG, DENMARK, GERMANY, MEMEL, SAAR, SWEDEN, and SWITZERLAND under *History*; JEWS; FASCISM.

NEBRASKA. Population. On Apr. 1, 1930 (Fifteenth Census), 1,377,963; July 1, 1934 (latest Federal estimate), 1,395,000; 1920 (Census), 1,296,372. Omaha had (1930) 214,006 inhabitants; Lincoln, the capital, 75,933.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	7,820,000	105,570,000	\$58,064,000
	1934	6,676,000	21,363,000	18,586,000
Hay (tame) ...	1935	1,710,000	2,957,000*	14,341,000
	1934	1,480,000	1,421,000*	22,310,000
Wheat	1935	3,080,000	39,472,000	33,398,000
	1934	2,310,000	15,838,000	13,279,000
Oats	1935	2,620,000	75,980,000	20,515,000
	1934	1,224,000	8,568,000	4,541,000
Sugar beets	1935	50,000	613,000*	.....
	1934	60,000	549,000*	2,525,000
Potatoes	1935	126,000	8,694,000	4,782,000
	1934	115,000	3,450,000	3,002,000
Barley	1935	713,000	15,686,000	5,647,000
	1934	360,000	2,700,000	1,620,000
Rye	1935	500,000	7,250,000	2,828,000
	1934	182,000	728,000	568,000

* Tons.

Education. The inhabitants of school age, taken as including all between 5 and 21 years, were reckoned for the academic year 1934-35 as numbering 415,834. The enrollments of pupils in the public schools in the course of that year attained 312,355. Of these, 145,975 were in the graded elementary schools of cities and villages; 90,103 were in rural schools; and 76,277 were in high schools. The year's expenditures for public schools throughout the State totaled \$18,343,160. The yearly salaries of the teachers averaged \$844.29.

Charities and Corrections. The State maintained, in 1935, 17 institutions for the care and custody of persons. Their operation was directed by the State Board of Control, a body composed of three members, who held by appointment for terms of six years ending respectively in rotation.

The 17 institutions held, on Dec. 1, 1935, 7641 inmates. The institutions and the number of inmates in each were: Institution for the Feeble Minded, at Beatrice, 1206; Girls' Training School, Geneva, 192; Soldiers' and Sailors' Home, Grand Island, 207; Hastings State Hospital, Ingleside, 1509; State Industrial School, Kearney, 195; Hospital for the Tuberculous, Kearney, 151; Lincoln State Hospital, Lincoln, 1224; Orthopedic Hospital, Lincoln, 89; State Penitentiary, Lincoln, 911; Nebraska Industrial Home, Milford, 68; Soldiers' and Sailors' Home, Milford, 109; School for the Blind, Nebraska City, 60; Norfolk State Hospital, Norfolk, 1056; School for the Deaf, Omaha, 193; Reformatory for Women, York, 45; Home for Dependent Children, Lincoln, 120; Reformatory for Men, Lincoln, 306.

Legislation. Acting in advance of the passage of the Federal Social Security bill, the Legislature adopted a measure giving a broad grant of authority for what was designed to be a system of pensions for needy elderly persons, to conform with the requirements for the expected Federal subvention. It imposed a special tax of 1 cent a gallon on sales of gasoline, designed to raise \$3,000,000 in the ensuing fiscal year, to provide revenue for the pension system and aid to the unemployed, and it also assigned to the pension fund \$1,000,000 of the revenue derived from liquor taxes and all the proceeds of a head tax of \$2 imposed on persons between the ages of 21 and 50 years. However, a State Assistance Committee was created and endowed with much discretion in the dispensation

of \$4,000,000 expected from above-mentioned taxes over the ensuing two years, in coöperation with the Federal programmes for relief of the distress of the unemployed and for "social security."

The State's moratorium on the foreclosure of mortgages was extended for two years. This, the last regular session before the decreed advent of a unicameral Legislature, fixed the number of the successor chamber at 43 members. A proposed resolution in favor of the Townsend plan for Federal payment of high pensions to the elderly was defeated. The Federal act outlawing debt stipulations for payment in gold or its equivalent was supplemented by an act abrogating the gold clauses of debts both public and private owed in the State.

After much of the above-noted legislation for public aid to needy classes had been set aside by the courts (see *Events*, below) a special session held late in the year enacted measures to provide a temporary substitute. The administration of State pension funds was assigned to the State Treasurer. Out of \$5,113,000 a year allotted from the proceeds of a higher tax on gasoline, disbursements were allowed on the following scale: Not more than 1 per cent for cost of State administration, 24.52 per cent for relief of the needy unemployed, 1.56 for the blind, 57.27 for pensions to the aged, 15.56 for dependent children, 0.78 for crippled children, and 0.31 for child welfare.

Political and Other Events. The State Supreme Court in a decision rendered September 20 invalidated as unconstitutional the acts (see above) empowering the State Assistance Committee to allot and expend \$4,000,000 for divers purposes. The acts were held to delegate the legislative power. The decision held invalid the imposition of the special one-cent tax on gasoline, which had already realized about \$1,000,000; it left the State without the chief of intended resources to apply to cooperation with the FERA in supporting the destitute unemployed and for paying pensions to the elderly. The pension act itself was not touched by the decision, but the means for its application were in great measure destroyed.

The State had not contributed to the support of its destitute unemployed class in 1934, the FERA had granted thereto \$8,003,842, and the subdivisions \$2,195,317. In the Federal shift to "work relief" the President allotted to the State \$4,768,000 for work-making enterprises, out of the \$909,077,211 apportioned up to October 8. The State government was one of the few of those that more than met their expenditures of the two years ended with the fiscal year 1935. Its available balance in the general fund on June 30 was about \$750,000 higher than that of two years before. The State lived up to its constitutional prohibition of debt, issuing neither bonds nor the constitutionally permissible warrants in anticipation of receipt of taxes.

A flood in the valley of the Republican River on June 1 caused 86 or more deaths and widespread damage. A protracted strike among employees of the Omaha and Council Bluffs Street Railway Company led to Governor Cochran's declaring martial law in Omaha on June 16, ordering the company's cars removed from the streets, and ordering enforced arbitration. Former Governor Charles W. Bryan was elected mayor of Lincoln on May 7.

Officers. The chief officers of the State, serving in 1935, were: Governor, R. L. Cochran; Lieutenant-Governor, Walter H. Jurgensen; Secretary of State, Harry R. Swanson; Auditor, Fred C. Ayres; Treasurer, George E. Hall; Attorney-

General, William H. Wright; Superintendent of Public Instruction, Charles W. Taylor.

Judiciary. Supreme Court: Chief Justice, Charles A. Goss; Associate Justices, William B. Rose, Edward E. Good, George A. Eberly, L. B. Day, Bayard H. Paine, Edward F. Carter.

NEBRASKA, UNIVERSITY OF. A State institution of higher education in Lincoln, Neb., founded in 1869. The enrollment for the autumn of 1935 was 6239. There were 2079 students enrolled in the summer session of 1935. The faculty numbered 351 full-time members. The permanent endowment fund amounted to \$960,927. The library contained 294,435 volumes. Chancellor, Edgar A. Burnett, D.Sc.

NECROLOGY. The following list contains the names of notable persons who died in 1935. Articles will be found in this volume, in their alphabetical order, on those whose names are given below without text.

ABBOTT, ALEXANDER CREVER. American bacteriologist, died at Cape Cod, Mass., Sept. 11, 1935. Born in Baltimore, Md., Feb. 26, 1860, he took his M.D. degree at the University of Maryland in 1884 and later attended Johns Hopkins University (1884-87), the University of Munich (1887-88), and the University of Berlin (1888-89). Following his return to the United States in 1889 he became assistant in hygiene and bacteriology at Johns Hopkins University. In 1891 he joined the University of Pennsylvania where he served, successively, as assistant in charge of the laboratory of hygiene (1891-96), and professor of hygiene and bacteriology and director of the laboratory of hygiene (1897-1929). In Philadelphia he was appointed director of the division on pathology, bacteriology, and disinfection of the Bureau of Health, and from 1903 to 1909 was chief of that Bureau and president of the Board of Health. Also, during 1919-29, he filled the position of director of the University's school of hygiene and public health. In 1929 he retired as professor emeritus. Dr. Abbott was a member of the Association of American Physicians, the American Philosophical Society, the Society for Experimental Biology and Medicine, and wrote *The Principles of Bacteriology* (1892, 1921) and *The Hygiene of Transmissible Diseases* (1899, 1902).

ADAMSON, ROBERT. American business man and banker, died in New York City, Sept. 19, 1935. Born in Adamson's District, Ga., Mar. 31, 1871, he received a common school education, and then began a career in the newspaper field. After serving as editor of the Atlanta (Ga.) *Constitution*, he was associate editor of the Atlanta *Journal* and in New York, was political writer for the New York *World* (1899-1909). As the result of his assignment to the New York City Hall, as special reporter, he became secretary to Mayor William J. Gaynor in 1910. On the death of the latter in 1913 he continued to act in the same capacity for Mayor A. L. Kline. From 1914 to 1917, during Mayor John P. Mitchell's administration, he was fire commissioner of New York City and introduced many reforms in the fire department. Among these were the teaching of fire prevention, the elimination of wooden cars in the subways, and the motorization of fire trucks. After being defeated for the office of President of the Board of Aldermen in 1917 he became vice president of the International Arms and Fuse Co., president, and later director and member of the executive committee, of the Petroleum Heat and Power Co. In the banking world he was chairman of the board of directors of the National American Bank and on its merger with the Central Mercantile Bank and Trust Co., became vice president and director. In 1928 the latter united with the Bank of United States and Mr. Adamson retained his office, until the institution closed its doors in 1930. In the court proceedings that followed the failure of the bank, Mr. Adamson was not indicted. In 1934 he entered into a partnership with Ray D. Lillibridge and the late Karl K. Kitchen (q.v.) in a public relations firm. On the death of Kitchen in June, 1935, the partnership was dissolved and Mr. Adamson operated a firm of his own. He had been a director of the Argent Financial Corp., Alfred A. Knopf, Inc., the Empire Bond and Mortgage Co., the Fifth Avenue Association, and was a member of the New York State Chamber of Commerce.

ADDAMS, JANE, died May 21, 1935.

ADLER, HERMAN MORRIS. American psychiatrist and criminologist, died in Boston, Mass., Dec. 7, 1935. Born in New York City, Oct. 10, 1876, he received the A.M. and M.D. degrees at Columbia University in 1901. He became associated with the Harvard Medical School, serving successively as assistant (1907-09), instructor in neuropathology and psychiatry (1909-12), and assistant professor of psychiatry (1912-16). Also, during the latter period, he was chief of staff of the Boston Psychopathic Hospital. He removed to Chicago in 1916 where, under the auspices of the Rocke-



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Polish Dictator



International
THE MARQUESS OF READING
English Diplomat



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American Jurist



American Museum of Natural History
HENRY FAIRFIELD OSBORN
American Scientist



JANE ADDAMS
American Sociologist



Wide World Studio
JAMES H. BREASTED
American Orientalist



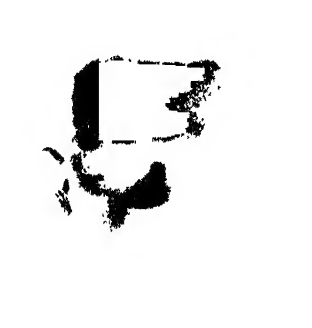
Wide World
FRANCIS, CARDINAL BOURNE
English Prelate



Howard Coster
LAWRENCE OF ARABIA
English Soldier



ARTHUR HENDERSON
English Labor Leader



LORD BYNG
British Soldier



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American Soldier



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EARL JELlicoe
British Admiral



Keystone

HUGO DE VRIES
Dutch Botanist



Wide World

HUGO JUNKERS
German Engineer



Wide World Studio

ADOLPH S. OCHS
American Publisher



MICHAEL PUPIN
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Irish Poet



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SIR CHARLES KINGSFORD-SMITH

feller Foundation and the National Committee on Mental Hygiene, he studied facilities for the detection and care of mental infirmities. In 1917 he was named a director of the Juvenile Psychopathic Institute, and in June of the same year, became criminologist for the State of Illinois by appointment of Governor Lowden. He retained this post up to 1930. During the World War, Dr. Adler served in the Medical Corps of the U.S. Army with the rank of major, and was occupied at that time with disciplinary psychiatry in military prisons. In 1919 he was invited to occupy the chair of criminology at the Medical College of the University of Illinois where he served until 1928, and where he was head of the department of social hygiene, medical jurisprudence, and criminology. He then joined the faculty of the University of California, where from 1930 he was professor of psychiatry. An adviser to the California Department of Institutions, he was a director of the Behavior Research Fund since 1926 and a member of the Harvard Survey of Crime and Law. A Fellow of the American Medical Association, Dr. Adler held membership in many medical and scientific societies. In his work on criminal investigation, he perfected the so-called lie detector, and wrote the section on medical science and criminal justice in the *Criminal Justice Survey* of the Cleveland Foundation in 1921, as well as contributing to various scientific journals on psychiatric and criminological matters. His work dealt principally with the personality and behavior difficulties and mental factors in criminology.

AGAR, JOHN GIRAUD American lawyer, died at New Rochelle, N. Y., Sept. 20, 1935. Born in New Orleans, June 3, 1856; educated at Georgetown University from which he was graduated in 1876, and from Columbia College Law School in 1880. Following his admittance to the bar of the State of New York he began to practice law in New York City. An independent Democrat he received the appointment of assistant United States Attorney for the Southern District of New York from President Cleveland in 1881, but resigned in the following year to devote his time to his law practice as senior partner in the firm of Agar, Ely, and Fulton. Agar's interest in the betterment of the civic affairs of New York was paramount, and in the election of 1891, he served as chairman of the campaign committee of the People's Municipal League. Largely through his efforts the measure adopting the use of the Australian ballot was passed. In 1896, Mayor Strong, a Reform mayor, appointed him a member of the school commission of the Board of Education and on this he served for three years. When he resigned he gave as his reason for doing so the fact that the city's educational policy was again in the hands of politicians and that things were as bad as they had been in 1896. Becoming president of the Reform Club in 1906, his administration was marked by an agitation for civic reform, particularly in regard to the tariff, currency, and municipal civil service in which Mr. Agar was greatly interested. He served on many committees concerned with civic affairs, and was vice president of the National Civic Federation in 1905, and president of the Municipal Art Society, 1908-09, and the National Arts Club, 1910. In 1931 he offered, through the National Arts Club, a prize of \$3000 for the best book on the subject, "The Soul of America." During the World War, Mr. Agar was a member of the War Department's Commission on Training Camp activities and served on the United War Work Campaign. An ardent conservationist, and for many years president of the Association for the Preservation of the Adirondacks, Mr. Agar, in 1927, led the fight against Amendment No. 7 to the State Constitution, which would permit a highway to be built over Whiteface Mountain, but the Amendment was voted and the road opened to the public on Sept. 14, 1935. In 1916 Mr. Agar was made a Knight of the Order of St. Gregory by Pope Benedict XV.

ALDIN, FRANK CHARLES WINDSOR. British painter and illustrator, died in London, Jan. 6, 1935. Born at Slough, Buckinghamshire, Apr. 28, 1870, he was educated at Eastbourne College and Solihull Grammar School. He then studied anatomy at South Kensington, and animal painting under Frank W. Calderon. His first drawing was published in the *Graphic* in 1891 and three years later he was commissioned to illustrate Kipling's *Jungle Stories* for the *Pall Mall Budget*. In 1889-1900 he painted a series of sporting prints in vivid colors, known as "The Fallowfield Hunt," which became so popular as to be reproduced by thousands in England and the United States. Among later notable drawings and paintings since were "A Dog Day" (1902) and "Twelve Hunting Counties" (1912). In 1910 he illustrated an edition of Dickens's *Pickwick Papers*. Although he did many landscapes, hunting scenes, and old inns, he was best known for his ability to portray dogs. Aldin made many drawings for the English illustrated weeklies, and for important books, becoming one of the best-known men of the day in his profession. The National War Museum purchased two of his pictures in 1918. He published *Handley Cross* (1912), *Painting Book* (1913), *The Farm Yard* (1913), *Jock and Some Others* (with R. Weylett, 1913), *Old Inns* (1919-20), *Old Manor Houses* (1923), *Cathedrals of England* (1924), *Ratcatcher to Scarlet* (1926), *The Romance of the Road* (1928), *Dogs of Character* (1930), *An Artist's Models* (1930), *Scarlet to M. F. H.* (1933), and *Who's Who at the Zoo* (with J. B.

Morton, 1933). His autobiography, *Time I Was Dead*, was issued late in 1934.

ALEY, ROBERT JUDSON. American mathematician and educator, died in New York City, Nov. 17, 1935. Born near Coal City, Ind., May 11, 1863, he began teaching in the local schools at the age of 15. During the summers from 1879-82 he attended Northern Indiana Normal School, now Valparaiso University, teaching school in the winter months. In 1882 he graduated from the College, and was appointed principal of the high school at Spencer, Ind. He held this position until 1887, with the exception of 1885 when he took a special course at Indiana University. In 1887 he became instructor in mathematics at Indiana University, meanwhile taking special courses, and graduating the following year, the first graduate to have majored in mathematics. He then became professor of mathematics at Vincennes University but returned to Indiana University in 1891. He taught mathematics there until 1909, except for the years 1894-95, when he was acting assistant professor of mathematics at Leland Stanford, Jr., College, and 1896-97 when he was Harrison fellow at the University of Pennsylvania, where he took his degree of Ph.D., writing on *The Geometry of the Triangle*. Professor Aley ran on the Democratic ticket for the office of State Superintendent of Schools in 1907, but was defeated. However, two years later he was elected and served until November, 1910, when he resigned to become the fifth president of the University of Maine. In 1921 he accepted a like position at Butler University in Indianapolis, which he held until 1931, when he retired as president emeritus. Always interested in the science of mathematics, particularly in relation to pure geometry, Dr. Aley served as mathematical editor of the *Inland Educator* and the *Educator-Journal* for many years, serving the last-named publication as editor-in-chief and president from 1903 to 1912. He was a frequent lecturer before teachers' institutes, and a member of many mathematical and scientific societies, as well as a fellow of the American Association for the Advancement of Science. From 1913 to 1916, he was president of the National Council of Education, and from 1916 to 1917, president of the National Education Association. He was the author of *Graphs* (1900); with O. O. Kelso, *Revision of Cook and Cropsy Arithmetic*, (1904), and with David A. Rothrock, *The Essentials of Algebra* (1904), and *Supplementary Problems in Algebra* (1912). With his son, Max Aley, he wrote a *Story of Indiana* (1912).

ALI IBN HUSSEIN. Former King of Hejaz, died at Bagdad, Feb. 14, 1935. He was born in Mecca in 1878, the eldest son of King Hussein of Hejaz. During his father's reign he bore the title Emir of Medina and served as a political aide in controlling all activities in Hussein's dominions. During the World War he was present at the siege of Medina and led auxiliaries against the Turks in Palestine. In 1924 King Hussein abdicated in favor of Ali, who in turn was compelled to give up his throne on Dec. 19, 1925. He took up residence with his brother, King Feisal of Iraq. During his brother's many visits to Europe he served as Regent until September, 1933, when his nephew, Crown Prince Ghazi, now King, became of age and was appointed Regent. During Ali's 10-year exile in Bagdad he was closely connected with the interests of Iraq.

ALLEN, CHARLES EDWARD. American diplomat, died at Gibraltar, Apr. 8, 1935. Born at Foster, Ky., Apr. 13, 1891, he received his education at Centre College, Danville, Ky. Before entering on a diplomatic career, he served in 1911-12 as principal of the high school at Mt. Sterling, Ky. He began foreign service in 1912 and two years later was appointed student interpreter in Turkey. His next assignment was that of consular agent at Adrianople in 1915-16. He then served successively as vice consul at Constantinople, 1916-17, as member of the American Consulate at Algiers, 1917-18, and vice consul at Nantes, France, 1918-19. After serving at Constantinople as vice consul and consul during 1919-21, and at Damascus as consul in 1921-23, he returned to Constantinople in the latter year and remained there until 1935. On the death of Richard L. Sprague, consul at Gibraltar in 1934, Mr. Allen succeeded to the post.

ALLEN, SIR JOHN SANDEMAN. British merchant and politician, died in London, June 3, 1935. Born in Croydon, Surrey, Sept. 26, 1865, he received his education at College School, Edinburgh, and in France and Germany. In 1882 he entered the marine insurance field with the Sea Insurance Co., Ltd. of Liverpool. Later he joined the Union Marine Insurance Company of which he became secretary in 1892, general manager in 1908, and deputy chairman in 1921. In the Liverpool Salvage Association, which he joined in 1892, he served as deputy chairman and, later, as chairman for four years. He retired in 1921 as marine manager of the Phoenix Assurance Company, and general manager and secretary of the Marine Insurance Company, to devote his time to public work. During the World War he served on the War Committee of the Chamber of Shipping as a representative of the Liverpool Underwriters Association. One of the marine insurance advisers at the Allied Conference which worked in Paris on the Peace Treaty schedule pertaining to enemy debts, he served also as chairman of the Marine Insurance Advisory Committee to the Controller of the Clearing House on enemy debts in 1920.

The following year he became a Conservative member of the Liverpool City Council, and in 1922, chairman of the Liverpool Chamber of Commerce. He was later named chairman of the Federation of Chambers of Commerce of the British Empire. Elected to the House of Commons in 1924 as a Conservative from the West Derby Division of Liverpool, Sir John was reelected to the post in 1931. As chairman of many commercial committees in the House, he stressed the importance of coastal shipping, and urged that it be recognized as an integral factor in the nation's transport system. In the summer of 1933, as chairman of the Joint East African Advisory Board, he visited the colonies and settled various situations that had arisen there. Sir John held the office of vice president of the Royal Empire Society, the Savings Bank Association, the West Lancashire Association for Mental Welfare (1924-27), chairman of the East African Board, the Commercial Committee of the House of Commons and the Coastal Trade Development Council. He was knighted in 1928.

ALLPORT, FRANK. American ophthalmologist and otologist, died in Nice, France, Aug. 3, 1935. Born at Watertown, N. Y., Feb. 22, 1857, he took his M.D. degree at the Chicago Medical College in 1876 and then studied at the University of Heidelberg in Germany. On his return to the United States he practiced general medicine for 5 years in Sycamore, Ill., and for the next 10 years specialized in ophthalmology and otology in Minneapolis. After serving as professor of clinical ophthalmology and otology at the University of Minnesota he went over to Northwestern University to serve in the same capacity. He was eye and ear surgeon for several railroads and served also St. Luke's Hospital, doing much work in industrial and mastoid surgery. Dr. Allport advocated the examination of school children's eyes and ears and is reputed to have been the first to cure vernal conjunctivitis. A former president of the Ophthalmology Section and chairman of the conservation of vision committee of the American Medical Association, he was also a former president of the Minnesota Medical Society, the Chicago Ophthalmology Society, and the Chicago Otology Society. He wrote *State Laws Concerning Eyes, Care of the Eyes*, and many bulletins on the subject.

AMES, CHARLES BISMARCK. American financier and lawyer, died at Meredith, N. H., July 21, 1935. Born at Macon, Miss., Aug. 1, 1870, he took his B.S. degree at Emory and Henry College, Virginia, in 1890 and his LL.B. degree at the University of Mississippi two years later. Admitted to the bar in 1892, he set up practice at Macon and continued there until 1899. In the latter year he removed to Oklahoma and in 1911 was appointed presiding justice of Division No. 1 of the Supreme Court Commission. He resigned the latter post in 1913 and returned to his law practice. During the World War he served on the Oklahoma State Council Defense and was Federal Food Administrator of his State. He was also chairman of the Oklahoma City Liberty Loan Committee. At the end of the war he became assistant to the United States Attorney General, serving in that capacity during 1919-20. During the latter period he displayed ability as an intermediary in labor disputes. Three years later he removed to New York City where he became general counsel and director for The Texas Company. During his association with this concern he was an ardent advocate for conserving the country's oil fields. He resigned from the latter company in 1925 and from 1928 to 1932 was vice president and a director in the Texas Corporation. In May, 1933, he became chairman of its Board of Directors. Mr. Ames was president of the American Petroleum Institute from November, 1932 to May, 1933. A delegate to the Universal Congress of Lawyers and Jurists at St. Louis in 1904 and to the Ecumenical Methodist Conference of the Methodist Episcopal Church, South, at Toronto in 1911 and at London in 1921, he was also a delegate to the Democratic Convention in 1920. In 1916 he was president of the Oklahoma State Bar Association.

AMES, HERMAN VANDENBURG. American educator, died at Philadelphia, Feb. 7, 1935. Born at Lancaster, Mass., Aug. 7, 1865, he graduated from Amherst College in 1888, and took additional courses at Columbia University the following year. In 1890 he received his M.A. degree from Harvard and the next year, his Ph.D. degree. From 1891 to 1894 he taught history at the University of Michigan, and in the latter year went to the universities of Leipzig and Heidelberg for further study. On his return to the United States he accepted an offer from Ohio State University to serve as assistant professor of history during 1896-97, and later joined the University of Pennsylvania as instructor in American constitutional history. He became assistant professor in 1903 and full professor in 1908. Named Dean of the Graduate School in 1907 he retained the post for 21 years. Dr. Ames edited *State Documents on Federal Relations, The States and the United States*, and wrote *The Proposed Amendments to the Constitution of the United States*, which received the prize of the American Historical Association in 1897; *Outline of Lectures on American Political and Institutional History during the Colonial and Revolutionary Periods* (3d ed., 1908); and *Syllabus of American Colonial History* (with Dr. W. T. Root, 1912). He was a member of the American Philosophical Society, American Political Science Association, Phila-

delphia Geographic Society, and the American Historical Association.

AMPHILL, ARTHUR OLIVER VILLIERS RUSSELL, SECOND BARON. English administrator, died in London, July 7, 1935. Born in Rome, Feb. 19, 1869, he was educated at Eton and New College, Oxford, and embarked on a political career in 1895 first as assistant private secretary to Joseph Chamberlain at the Colonial Office, where two years later he became Chamberlain's private secretary. In 1899 he received the appointment of Governor of Madras, succeeding Sir A. Havelock, and was the first man of his age (31) to be sent out to India in this capacity and the last to be appointed in Queen Victoria's reign. He proved to be an able administrator, and when Lord Curzon returned to England in 1904 Amphill was named acting Viceroy of India. On his return to England, in 1906, he became an ardent sympathizer with Indian settlers in South and East Africa. As chairman of Lord Marley's Advisory Committee, established in favor of Indian students in Great Britain, he devoted a great deal of his time to the students' welfare. During the War Amphill served as commander of battalions in the Leicestershire and Bedfordshire Regiments, serving also as Indian Labor Corps Adviser at General Headquarters on the Western Front. In 1919 he voiced his disapproval of, and voted against the Government of India Bill. He urged that Indians be treated as British subjects throughout the Empire, and was an active leader in the Indo-British Association which fought the 1919 Bill. In 1935 he again voted against the Government of India Bill. In Freemasonry he was second only to the Duke of Connaught, Grand Master of English Freemasonry. At the age of 21 he was named Provincial Grand Master for Bedfordshire and in 1908, Pro Grand Master of England. He filled the latter office up to the time of his death. Lord Amphill represented the British Government at the International Conference on the Sugar Bounties held in Brussels in 1898 and was a founder of the National Party, serving as president of its council in 1919. Among the honors bestowed on him were: Knight Grand Commander of the Order of the Indian Empire (1900), Knight Grand Commander of the Order of the Star of India (1904), and Knight of the Grand Cross of the Order of the British Empire (1917).

ANDERSON, HARRY BENNETT. American jurist, died at Jackson, Tenn., Apr. 9, 1935. He was born in Van Buren Co., Mich., Nov. 5, 1879. Educated for the law he took the LL.B. degree at Columbia University in 1904, and was admitted to the Tennessee bar in the latter year, then became a member of the firm of Brown and Anderson—an association that lasted until 1918. From 1904 to 1910 Anderson was a member of the Republican State Committee of Tennessee. During the World War he served as judge advocate of the 26th Division in France with the rank of lieutenant colonel from 1917 to 1919. After the War he returned to Tennessee and at Memphis served as a referee in bankruptcy. President Coolidge appointed him a judge in the United States District Court of the Western District of Tennessee in 1925, a post he held up to the time of his death. One of his last cases was that in which he ruled that the NRA was not empowered to fix prices. In 1930 charges were made on Judge Anderson's judicial career and brought before the Judiciary Committee which directed that they be dropped. Judge Anderson was a former president of the Tennessee Bar Association and the Memphis Chamber of Commerce.

ANDREADES, ANDREW, died May 29, 1935.

ANDREWS, REAR ADMIRAL PHILIP, U.S.N., RET. American naval officer, died in San Diego, Calif., Dec. 19, 1935. Born in New York City, Mar. 31, 1866, he was graduated from the United States Naval Academy in 1886. During the Spanish-American War he served on the *Bennington* and during 1904-06 with the General Board of the Navy Department. In the following year he joined the Bureau of Navigation, and during 1907-09 went to sea on the *Kansas*. In the early part of 1909 he was at the Naval War College at Newport, R. I., and from 1909 to 1911, served as aide to the Secretary of the Navy. In 1911 he returned to the Bureau of Navigation as its chief with the rank of rear admiral, and two years later, again served in Washington with the General Board. After commanding the *Montana* in 1913 and the *Maryland* during 1913-14, he was recalled from sea duty to take charge of the Naval Training Station at San Francisco. Assigned to the Naval War College at Newport again during 1916-17, he was appointed chief of staff of the Fifth Naval District in March, 1917. In January, 1918, he was named commander of the *Mississippi* and in September, 1918, was sent to the United States Naval base at Cardiff, Wales. In 1919 he was assigned to the United States Naval Forces on the Eastern Mediterranean and two years later returned to the United States where he was given command of the Navy Yard at Norfolk, Va. From January, to June, 1923, he was commandant of the Fifth Naval District and from 1923 to 1925, commander of the United States Naval Forces in Europe with the rank of vice admiral. In 1925 he returned to the United States and became commander of the First Naval District and the Navy Yard at Boston, Mass., with the rank of rear admiral. He was retired for age on Mar. 31, 1930.

ANDRIEU, PAULIN PIERRE, CARDINAL. French Roman

Catholic prelate, died at Bordeaux, Feb. 15, 1935. Born at Seysses, Haute-Garonne, Dec. 8, 1849, he was educated at the Seminary of Toulouse. Ordained to the priesthood in 1874, he became vicar of Rieumes. He served as secretary of the archdiocese of Toulouse and was raised to the bishopric as Bishop of Marseilles in 1901. Two years after his elevation to cardinal priest in 1907 with the Titular Church of St. Onofrio, he became Archbishop of Bordeaux and Primate of Aquitaine in succession to Cardinal Lecot. He came to be known as one of the most eloquent preachers in Southern France, and, in 1926, voiced his disapproval of the organization of religious lay groups with political doctrines. Cardinal Andrieu became dean of French cardinals in 1930 on the death of Cardinal Luçon of Rheims.

ARMSTRONG, ANDREW CAMPBELL, American educator, died at Middletown, Conn., Feb. 22, 1935. Born in New York City, Aug. 22, 1860, he graduated from Princeton University in 1881 and received the master's degree in 1884. The following year he graduated from Princeton Theological Seminary, and went to Germany where he attended the University of Berlin during 1885-86. On his return to the United States in the latter year he accepted the post of associate professor of ecclesiastical history at the Princeton Theological Seminary, and in the following year became instructor of history at the University. In 1888 he joined Wesleyan University where he was professor of philosophy until 1930 when he retired as professor emeritus. Professor Armstrong was president of the American Philosophical Association in 1915 and a member of the National Institute of Social Sciences. At the International Congress of Philosophy held in 1926 he was honorary secretary, and since that date, a member of the Permanent International Commission. Also, at the International Congress of Arts and Sciences held in St. Louis in 1904 he served as chairman of the section of metaphysics. While at Princeton he was associate editor of the *New Princeton Review* (1887-88) and cooperating editor of the *Psychological Review* (1904-09). Besides translating Richard Falkenberg's *History of Modern Philosophy* in 1893 and contributing to Baldwin's *Dictionary of Philosophy and Psychology* (1901-02) and to *Contemporary American Philosophy* (1930), he wrote *Transitional Eras in Thought* (1904).

ASTRID (SOPHIE LOUISE THYRA), QUEEN, died Aug. 29, 1935.

ATTEBURY, WILLIAM WALLACE, died Sept. 20, 1935. AVORY, SIR HORACE EDMUND, English jurist, died at Rye, Sussex, June 13, 1935. Born in London, Aug. 31, 1851, he attended King's College, London, and Corpus Christi College, Cambridge, receiving the LL.B. degree from the latter in 1874. Called to the Bar by the Inner Temple in 1875, he served in the Central Criminal Court in London and on the South Eastern Circuit. Named junior counsel to the Treasury at the Central Criminal Court in 1889, he became senior counsel 10 years later and capably discharged the duties of that office for 12 years. He became King's Counsel in 1901 and won distinction as a prosecuting counsel. Just before his appointment to the King's Bench Division in 1910, he had served as Commissioner of Assize on the South Eastern Circuit. When Justice Darling retired in 1924 Sir Horace succeeded him as senior judge of the King's Bench Division. In the latter capacity he sentenced Clarence Hatry, the swindler, and presided over Princess Yousouppoff's libel suit against the Metro-Goldwyn-Mayer film company in which she was awarded \$126,750 damages. He was reputed to have been expert in every branch of the law. Justice Avory was knighted in 1910 and appointed a member of the Privy Council in 1932.

AYLMER, LIEUT.-GEN. SIR FENTON JOHN, English soldier, died at Wimbledon, Surrey, Sept. 3, 1935. Born at Hastings, Sussex, Apr. 5, 1862, he was educated privately. In 1880 he joined the Royal Engineers and served in Burma during 1886-87. He took part in the Hazara Expedition of 1891, and for heroism during the storming of the Nilt Fort in Kashmir, in the Hunza Expedition of 1891-92, under the command of Col. A. Durand, he received the Victoria Cross. For services rendered while a member of an expedition sent to relieve Sir George Robertson, besieged in the British fort at Chitral in 1895, he was brevetted a lieutenant colonel. From 1912 to 1915 he served with the rank of adjutant general at headquarters, but in 1915 was sent to Mesopotamia as head of a division. In January, 1916, he took command of an expedition to relieve General Townshend at Kut-el-Amara, forced the Turks to retreat from Sheikh Saad on January 9 and from Wady on January 13, but failed to take Umm-el-Hanna on January 21. Townshend informed Aylmer that by rationing his men he could hold out for 84 days and further advance was postponed in order to receive reinforcements. The Turks were gaining in strength and on March 7, Aylmer decided on a surprise flank attack toward Shatt-el-Haj which failed and on March 12 he was superseded by General Gorringe. At the time of his death he held the rank of Colonel Commandant of the Royal Engineers. In 1907 he was created Companion of the Bath, and Knight Commander of the Bath in 1916 for his activities in the World War. Sir Fenton wrote *The Aylmers of Ireland* (1931).

BABBITT, FRANK COLE, American educator, died at Hartford, Conn., Sept. 21, 1935. Born at Bridgewater, Conn., June 4, 1867, he graduated from Harvard University in

1890, receiving the Ph.D. degree from that institution in 1895. During 1885-87 he taught in the public schools of Connecticut and, from 1890 to 1895, in a Boston private school. In 1895-96 he was selected for work in the American School of Classical Studies at Athens and at this time discovered the old Greek Theatre at Corinth. In 1896 he accepted a call from Harvard University to serve as instructor in Greek and held the post for two years. Thence he went to Trinity College, Hartford, Conn., where he served successively as instructor in Greek (1898-99) and professor from 1899. In 1931-32 Babbitt was visiting professor to the American School of Classical Studies at Athens. He held the office of president of the Classical Association of New England (1920-21); the American Philological Association (1926-27), and was a member of the Archaeological Institute of America and the American Association of University Professors. He wrote a *Greek Grammar* (1902), and translated Plutarch's *Moralia* (Loeb Classical Library) in 1927.

BABCOCK, EARLE BROWNELL, American educator, died in Paris, France, Mar. 1, 1935. Born in Saginaw, Mich., Sept. 12, 1881, he attended Columbia University, the Sorbonne, and the Collège de France. During 1903-05 he was an instructor in French and history at the Ethical Culture School in New York, after which he went to the University of Chicago where he served successively as instructor in French (1906-10) and assistant professor (1910-15). Then he accepted a call from New York University, where from 1915, he was professor of Romance Languages and Literatures. From 1915 to 1919 he headed that department and from 1922 to 1927 was dean of the Graduate School. From October, 1918 to January, 1919 he was a major in the American Red Cross and a director of the Paris school of the Red Cross personnel. Also, during 1920-21, he was stationed at Paris as director of the American University Union in Europe, and in 1925, was named assistant director of the European centre of the Carnegie Endowment for International Peace, with headquarters in Paris. In the latter capacity it fell to him to reorganize the work of the Centre after it had been disrupted by the World War, and in 1931 he proposed to enlarge the scope of the Centre's work. Important features of his duties were the collection of material on the status of world peace to be embodied in an international law library, the reporting of friction between nations, and the suggestion of methods to remove that friction. He served as president of the International Auxiliary Language Association, Inc. (from 1922); the Alliance Française of New York (1924-26), and the American Library in Paris (from 1925). A Fellow of the Royal Historical Association and of the American Association for the Advancement of Science, Babcock was a member of the American Historical Association, American Philological Association, and the Modern Language Association of America. He received the following honors: Officier de l'Instruction Publique, France (1911); Chevalier de la Légion d'Honneur, France (1924); Officier (1928); Commandeur du Phénix, Greece (1931); and Commandeur de la Couronne de Roumanie (1933).

BAKER, GEORGE PIERCE, died Jan. 6, 1935. BALDWIN, CHARLES SEARS, American educator and author, died Oct. 23, 1935 in New York City, where he was born Mar. 21, 1867. He received the A.M. degree from Columbia University in 1889 and two years later, took up the post of instructor in English at that institution. In 1895 he served as instructor in rhetoric there and later in the same year, accepted a call from Yale University where he became successively, instructor in rhetoric (1895-98), assistant professor (1898-1909), and full professor (1909-11). He returned to Columbia University in 1911 and since that date, held the chair of rhetoric and English composition. Professor Baldwin's publications include: *The Infections and Syntax of the Morte d'Arthur of Sir Thomas Malory* (1894); *De Quincey's Revolt of the Tartars* (1896); *The Expository Paragraph and Sentence* (1897); *A College Manual of Rhetoric* (1902, 4th ed., rev., 1905); *The English Bible as a Guide to Writing* (1905); *Essays Out of Hours* (1907); *Writing and Speaking* (1909); *Composition, Oral and Written* (1909); *College Composition* (1917, 1929); *God Unknown* (1920); *Ancient Rhetoric and Poetic* (1924); *Medieval Rhetoric and Poetic* (1928); *Introduction to English Medieval Literature* (1931), and *Three Medieval Centuries of Literature in England* (1932). Also, he edited *Specimens of Prose Description* (1895); *American Short Stories* (1904, Ger. ed., 1911); *Bunyan's Pilgrim's Progress* (1905), and *De Quincey's Joas of Arc and English Mail Coach* (1906).

BARBUSSE, HENRI, died Aug. 30, 1935. BARES, THE MOST REV. NIKOLAUS, German Roman Catholic prelate, died in Berlin, Mar. 1, 1935. Born Jan. 24, 1871, at Idenheim, near Trier (Treves) in Rhine Province, Prussia, he attended the Trier (Treves) Roman Catholic Seminary and took the doctorate degree at Breslau. Ordained priest in 1895, he returned to Trier Seminary as professor of theology, serving in that capacity during 1909-18 and from the latter date until 1928, was head of the Seminary. He became Bishop of Hildesheim in 1929, and four years later, on the death of the Most. Rev. Dr. Christian Schreiber, became Bishop of Berlin. At this time he displayed great courage and brilliance in resisting menaces

to the fundamental principles and ideals of the Roman Catholic Church, and fought for the rights of his Church in the Reich. He negotiated with the State on more than one occasion to interpret certain disputed articles of the Concordat. Ardently opposed to the Rosenbergian racial *Weltanschauung*, he was the author of many publications that expressed his views on this subject.

BARNES, EARL. American author and educator, died at New Hartford, Conn., May 29, 1935. Born at Martville, N. Y., July 15, 1861, he took the A.B. degree at Indiana University in 1889 and the M.S. degree at Cornell University two years later. He taught history at Indiana University in 1889 and from 1891 to 1897 held the chair of education at Stanford University. He lectured for the London Society for the Extension of University Teaching in 1900-01, and for the next 12 years served as staff lecturer for the American Society for the Extension of University Teaching. Mr. Barnes' publications included: *Studies in Education* (2 vols., 1897); *Where Knowledge Falls* (1907); *Women in Modern Society* (1912); and *Psychology of Childhood and Youth* (1914).

BARNHORN, CLEMENT JOHN. American sculptor, died Aug. 2, 1935, in Cincinnati, Ohio, where he was born in 1857. He attended St. Xavier College and then studied wood and marble carving under Henry L. Fry. Later he studied under Kelsae in Cincinnati, Bouguereau, Puech, Mercie, Ferner, and at the Julian Academy in Paris. After six months of study in Italy, he received honorable mention at the Paris Salon in 1895 for his "Magdalen." Five years later he was awarded a bronze medal at the Paris Exposition for the same work. His other awards consisted of honorable mention at the Pan-American Exposition, Buffalo, 1901; silver medal at the St. Louis Exposition, 1904. Barnhorn was said to have reached the peak of his career when he executed the ecclesiastical figures, the Crucifixion group and the St. Monica figure on the façade of the Church of St. Monica in Cincinnati. The latter work won for him the annual prize of the Samuel B. and Rosa F. Sachs endowment in 1929, which prize is awarded yearly for the outstanding achievement in the field of art. Mr. Barnhorn was the head of the department of sculpture at the Cincinnati Art Academy at the time of his death. His other works include: "Theodore Thomas" in the Cincinnati Music Hall; "Fountain" in Shortbridge High School, Indianapolis; fountain figure, Prince George Hotel, New York; "Fountain" Hugh High School, Cincinnati; "Magdalen," Cincinnati Art Museum; "Portrait Bust" Public Library, Cincinnati; "Madonna and Child" Cathedral façade, Covington, Ky.; "Fountain" Conservatory of Music, Cincinnati; 11 panels in Cincinnati Court House; "Portrait of Major C. R. Holmes," Cincinnati General Hospital, and the relief of Dr. P. S. Connor, Good Samaritan Hospital, Cincinnati. Mr. Barnhorn was a member of the Cincinnati Art Club and the National Sculptors Society.

BARRETT, CHARLES SIMON. American agriculturist, died at Union City, Ga., Apr. 4, 1935. Born in Pike Co., Ga., Jan. 28, 1866, he received a normal school education, and engaged in teaching and farming up to 1897 when he became an organizer among the farmers. Elected president of the Georgia Farmers' Union in 1905, the National Farmers' Union elected him to the same office in their organization in 1906 and he served for 22 years. During this period as many as 6000 business organizations came under the jurisdiction of the Union. President Theodore Roosevelt called him to represent Georgia at the First Governors' Conference held in Washington and he was appointed a member of the President's Country Life Commission. After declining appointment to the Industrial Relations Commission by President Taft, Barrett was named delegate to the Agricultural Institute at Rome by Secretary of State William Jennings Bryan. President Wilson appointed him a member of the Price Fixing Commission for the wheat crop in 1917, and in the same year he served as a member of the National Agriculture Advisory Commission. Mr. Barrett represented the National Board of Farm Organizations and the National Farmers' Union at the Paris Peace Conference of 1918-19, and was on the advisory council to the American delegates at the International Conference on the Limitation of Armaments. In 1924 he served as a member of the President's agricultural commission and four years later (1928), resigned his office in the National Farmers' Union.

BARTLETT, CLARENCE. American physician, died in Philadelphia, Aug. 26, 1935. Born in Brooklyn, N. Y., May 22, 1858, he received the M.D. degree from the Hahnemann Medical College and Hospital, Philadelphia, in 1879. During the next four years he was connected with the general dispensary department of the Hospital. On the creation of the department of nervous diseases in 1883, he became head of that section and in the following year lectured in the spring course on nervous diseases. Following his appointment as lecturer on mental and nervous diseases in the College in 1889, electrology was added to the lectureship. From 1890 he was neurologist to the Children's Homoeopathic Hospital in Philadelphia and to Hahnemann Hospital. In the Homoeopathic Medical Society of Pennsylvania he served as recording secretary (1883-85), corresponding secretary (1885-88), and president (1922). From 1883 he was assistant to the editor of the *Hahnemannian Monthly* for

five years, and in 1887 edited and published *Farrington's Clinical Materia Medica*, the shorthand notes of Dr. Farrington's lectures during 1876-80. His publications included: *Clinical Medicine—Diagnosis* (1903); *Clinical Medicine—Treatment* (1904); and *Practice of Medicine* (3 vols., 1923).

BARUCH, EMANUEL DE MARNAY. American physician, died at Valhalla, N. Y., July 1, 1935. Born in San Francisco, Feb. 22, 1870, he received the M.D. degree from the College of Physicians and Surgeons, Columbia University, in 1889 and later studied at the universities of Munich, Berlin, and Paris. In 1889 he established a practice in New York City. From 1892 he was professor of bacteriology and pathology at the University of the State of New York, professor of bacteriology and therapeutics at the Metropolitan Post-Graduate Medical School, and consulting physician to the Hospital for Deformities and Joint Diseases, and to the Philanthropic Hospital. A delegate to the International Tuberculosis Congress in Paris and Washington, D. C., also he represented the New York Medical Society, at the International Medical Congress held in London in 1913. Dr. Baruch received a number of decorations in recognition of his philanthropies. The writer of many articles on medical subjects, he produced also a play, *Judith and Arropherus*, in London in 1928 and in Darmstadt in 1929.

BARUS, CARL, died Sept. 20, 1935.

BÉLAND, HENRI SEVERIN. Canadian physician and legislator, died at Eastview, Ont., Apr. 22, 1935. Born at Louiseville, Que., Oct. 11, 1869, he attended Three Rivers College and Laval University. Four years after his election to the Quebec Legislature in 1897, he succeeded to the office of Mayor of St. Joseph. In 1902 he was elected to the House of Commons and reelected in 1904, 1908, 1911, 1917, and 1921. In 1909 he served as a commissioner at the Washington Conference to consider the conservation of the natural resources of the American continent, and in the same year was appointed a member of the Royal Conservation Committee. Béland was nominated to the King's Privy Council for the Dominion of Canada in August, 1911, and appointed Postmaster General by Sir Wilfred Laurier. The outbreak of the World War found Béland in Belgium where he enlisted with the Belgian Army with the rank of sergeant. When Canada entered the War he became a surgeon with the Canadian Medical Corps, and in 1915 was taken prisoner by the Germans and made to serve as an interne in their hospitals. Released in 1918 he returned to Canada, and in 1921 was appointed Minister of Soldiers' Civil Reestablishment and Public Health in the W. L. Mackenzie King Cabinet and in 1925 was nominated to the Senate. The late King Albert of the Belgians created him a Knight of the Most Distinguished Order of the Crown of Belgium. Also he served as president of the Canadian Medical Association.

BERG, ALBAN, died Dec. 24, 1935.

BERGMANN, CARL. German financier and economist, died in Berlin, Sept. 26, 1935. Born at Sommerda, he attended the universities of Geneva, Strasbourg, and Berlin. He began as a clerk in the Deutsche Bank in 1901 and was connected with it for 25 years. In 1919 he served as one of the representatives of the German Government before the Reparation Commission at Versailles, and the following year attended the financial conference of the League of Nations at Brussels. In 1921 he was present at the conference of the Allied Powers in Spa, Brussels, and London regarding reparations. In the same year he visited the United States, and attended also the reparations conference in Cannes. In 1922 he attended the international conference in Genoa and was present at nearly all the conferences held in London and Paris. In 1924 he retired from the Deutsche Bank and from all active connection with politics to become a partner in the banking firm of Lazard, Speyer-Elleszen in Frankfurt, which at the time was closely connected with Speyer and Co. of New York. Mr. Bergmann was the author, with Louis Loucheur of the *Micum* agreement under the Dawes Plan. He wrote *The History of Reparations*, which was published in the United States in 1928, and contributed to various financial periodicals.

BERKELEY, REGINALD CHEYNE. English playwright, died at Hollywood, Calif., Mar. 30, 1935. He was born in London, Aug. 18, 1890, and after attending the Bedford Modern School, went to New Zealand to matriculate at the University there. In 1912 he was admitted to the New Zealand bar and shortly before the outbreak of the World War, returned to England where he was called to the English bar by the Middle Temple. He served with the Rifle Brigade in the World War, receiving the Military Cross for his activity with that group, being promoted brigade major with Gen. George Carey's force before Amiens and general staff officer with the Fourth Army in 1918. Then he was transferred and served as brigade major with the 174th Infantry Brigade of the 59th London Division, and with the Second Infantry Brigade of the First Division. Returning to civilian life in 1919, he joined the staff of the League of Nations Union. He was London representative of the League of Nations Information Section in 1920, and joined the London office of the League on its formation in the following year. Elected to Parliament as Liberal member for Nottingham Central in 1922 he resigned the latter post. He represented the constituency until 1924 when he

resigned his seat to devote his time to writing. At the invitation of Winfield R. Sheehan of Fox Films, he came to the United States to write the screen version of *Cavalcade*. (See *NEW INTERNATIONAL YEAR BOOK* for 1932.) Mr Berkeley was best known for his books and plays. The latter include: *The Oilskin Packet* (with Bohun Lynch, 1917); *Decorations and Absurdities* (1922); *Unparliamentary Papers and Other Diversions* (1924); *The World's End* (a play, 1926); *The History of the Rifle Brigade in the Great War* (vol. 1, 1927); *Dawn* (1929); and the dramatic works: *French Leave* (1920); *Eight o'Clock* (1920); *Mr. Abdulla* (1926); *The White Château* (1927); *Listeners* (1928); *The Lady with a Lamp* (1929); *Machines* (1930), and *O.H.M.S.* (1931). At the time of his death he was preparing the second volume to *The History of the Rifle Brigade in the Great War*.

BERNET, JOHN JOSEPH American railway executive, died at Cleveland, Ohio, July 5, 1935. Born at Brant, Erie Co., N. Y., Feb. 9, 1868, he received a common school education. In 1889 he became a telegraph operator for the Lake Shore and Michigan Central Railroad. After serving as a train dispatcher from 1895 to 1901, he became successively trainmaster (1901-03); assistant superintendent (1903-05); divisional superintendent (1905), assistant superintendent, and general superintendent (1905-11). In 1911 he was sent to Chicago as assistant to the vice president of the New York Central lines west of Buffalo. In 1912 he became vice president of the Lake Shore and Michigan Southern, and in 1916 assumed the presidency of the New York, Chicago and St. Louis Railroad. When Mr. Bernet succeeded to the latter post the road had not been paying dividends on its common stock for 10 years and it was in general need of repair. During his term of office the road was changed from a double-track to a single-track line, and modern equipment and newer methods of operation were introduced. The operating revenue rose from \$23,969 a mile to \$44,867 a mile, and the freightage to 771 tons, almost doubling the original tonnage. The common stock rose in value from \$35 to \$200 per share and paid a dividend of 11 per cent. In 1927 Bernet joined the Erie Railroad in the same capacity and remained with that line until 1929. In this post he replaced the entire equipment of the road and had it operating on a profitable basis in a very short time. In 1929 the company began paying dividends on its preferred stock for the first time in 22 years. At the time of his death he was president of the Chesapeake and Ohio, Hocking Valley, and Pere Marquette Railroads, which three were brought together under a common management. Mr. Bernet was an outstanding figure in railroad development and advocated that the carrying of a greater load in less time and over a longer distance was more important than the mere speeding up of train movement. On the consolidation of the American Railway Association and the Association of Railroad Executives in September, 1934, Mr. Bernet was one of the five directors chosen from the East.

BLUNT-LIN, HERMAN, died Aug. 31, 1935

BICKNELL, ERNEST PERCY, died Sept. 29, 1935

BINGHAM, MAJ.-GEN. SIR FRANCIS RICHARD English soldier, died in London, Nov. 5, 1935. Born July 5, 1863, he entered the army in 1883, and from 1889 to 1892 was stationed at Aldershot with the 3d Infantry Brigade. In the latter year he was raised to the rank of captain and in 1893, served with the Egyptian Army. From 1893 to 1898 he was at Madras, India, and during 1894-1900 served with the Norfolk Artillery. In 1910 he was promoted to lieutenant colonel and from 1911 to 1913 was stationed at the Gunnery School as chief instructor. During the next three years he was at the War Office in the capacity of Deputy Director of Artillery with the rank of colonel. In 1916 he was a member of the Council in the Ministry of Munitions and the following year was raised to the rank of major general. Sir Francis had served throughout the World War, and in 1919 was sent to Germany as chief of the British section and President of the Sub-Commission for Armaments and Material on the Military Inter-Allied Commission of Control. Five years later he was named Lieutenant General of the Isle of Jersey and from 1925 to 1929, commanded troops in the Jersey district. In 1929 he was retired on pay. In recognition of his war services, Sir Francis was dubbed Companion of the Bath in 1915, Knight Commander of St. Michael and St. George in 1918, and in 1924, Knight Commander of the Bath.

BLACKETT, SIR BASIL PHILLOTT English financier, died near Giessen, Germany, Aug. 15, 1935. Born at Nottingham, England, Jan. 8, 1882, he was educated at Marlborough and University College, Oxford. Entering the Treasury in 1904, he became secretary to the Indian Finance and Currency Commission and served in that capacity during 1913-14. He also held the same post with the Capital Issues Committee in 1915. In October, 1914, he went on a special mission to the United States Government in connection with exchange problems arising out of the War. A member of the Anglo-French Financial Mission to the United States which raised the Anglo-French loan of \$500,000,000 in October, 1915, he was a member of the National War Savings Committee in 1916. He represented the British Treasury in the United States during 1917-19, and for the next three years was Controller of Finance in the Treasury. In 1922 he was named finance member of the Executive

Council of the Governor General of India, and held the post until 1928. Four years later he entered politics and contested Marylebone as a Conservative. Sir Basil held directorates in the Bank of England, the Imperial and International Communications, Ltd., Cables and Wireless, Ltd., Eastern and Associated Telegraph Companies, Marconi's Wireless Telegraph Company, Ltd., De Beers, Ltd., and was president of the British Social Hygiene Advisory Committee. Sir Basil was a Commandatore of the Order of the Crown of Italy; Officer of the Legion of Honor of France, and was created Companion of the Bath, 1915; Knight Commander of the Bath, 1921, and Knight Commander of the Star of India, 1926. He wrote *Planned Money* (1932) and *Great Events in History* (co-author, 1934).

BLAIR, SIR ROBERT English educator, died in London, June 10, 1935. Born Mar. 8, 1859, he took the M.A. degree at Edinburgh University and embarked on a teaching career. His first post was that of assistant master of Kelso High School where he remained during 1880-81. He served during the next two years in the same capacity at Aske's Hatcham School at New Cross, London, and in 1893 became head master of the Cheltenham School of Science and Technical School. Named inspector for the Science and Art Department of the North Scotland District in the following year he held the post until 1898. From this date until 1900 he served in the same capacity in the Scottish Education Department, and then became Chief Inspector of Technical Education in Ireland (1900-01). Following this he was appointed assistant secretary of technical instruction in the Department of Agriculture and Technical Instruction for Ireland. In 1904 he was appointed education officer of the London County Council and held the post for 20 years. During this period he aroused greater interest in technical and trade education, opened new schools, and urged that scholarship opportunities be made available to a greater number. Sir Robert was a member of the Mosely Education Commission to America in 1903 and held the office of president of the Association of Directors and Secretaries for Education, the National Association of Education Officers (1914), the Education Section of the British Association (1920), and of the Burns Club of London (1927-28). Also, he was a member of the Departmental Committee of the University of London, and of the Council of the Lord Kitchener National Memorial Fund. Sir Robert wrote *Some Features of American Education; The Relation of Science to Industry and Commerce*.

BLEYER, WILLARD GROSVENOR American educator, died at Madison, Wis., Oct. 31, 1935. Born in Milwaukee, Wis., Aug. 27, 1873, he received the B.L. degree in 1896, was a fellow in English during 1896-98, and in the latter year, received a Master of Letters degree from the University of Wisconsin. Also, in 1904, he received the Ph.D. degree from the same institution. During 1892-98 he was engaged in newspaper work, and two years later entered the educational field as instructor in English at the University of Wisconsin. In 1905 he became assistant professor of English, and in 1909, assistant professor of journalism. Associate professor from 1911 to 1916, he was full professor of journalism from 1916. Also, he served as chairman during 1906-19, and director, during 1919-27 of the course in journalism. Since 1927 he had been director of the School of Journalism at the University of Wisconsin. A special lecturer at the Wisconsin Library School from 1915, he held the same post in the American Library Association in 1922. Chairman of the National Council on Education for Journalism in 1923, he was chairman of the Council on Research in Journalism from 1924 to 1929. Professor Bleyer was a former president of the American Teachers of Journalism, the Association of American Schools and Departments of Journalism, and of the Wisconsin chapter of the American Association of University Professors during 1929-31. His publications included *Newspaper Writing and Editing* (1913, 1923, 1932); *Types of News Writing* (1916); *How to Write Special Feature Articles* (1919); *Main Currents in the History of American Journalism* (1927); and *Journalism* (1929). During 1904-13 he edited the *Press Bulletin* of the University of Wisconsin and in 1918, *The Profession of Journalism*.

BLOODGOOD, JOSEPH COLT American surgeon, died at Guilford, Md., Oct. 22, 1935. Born in Milwaukee, Wis., Nov. 1, 1867, he received the M.D. degree from the University of Pennsylvania in 1891. Appointed resident physician at the Children's Hospital in Philadelphia during 1891-92, he next served as assistant resident surgeon at Johns Hopkins Hospital, Baltimore, from June to November, 1892. In the same year he visited foreign clinics and hospitals and on his return to Johns Hopkins in 1893, became resident physician. He retained the latter post until 1897 when he became associate professor in surgery there. In 1929 he became professor of clinical surgery and from 1932 was adjunct professor of surgery. Also, he was chief surgeon of St. Agnes's Hospital. A Fellow of the American Association for the Advancement of Science, he was elected in 1924 a Fellow of the American College of Surgeons. In the World War he served with the Medical Reserve Corps with the rank of major. Keenly interested in the fight against cancer, Dr. Bloodgood instituted a systematic department of surgical pathology at Johns Hopkins and rendered great service when he instructed surgeons in

the best ways in which to diagnose the disease. For his work in the study of bone malignancy diagnosis and its treatment by X-ray and radium, Dr. Bloodgood received the gold medal of the Radiological Society of North America in 1929. He was a member of the general medical committee of the American Red Cross, of the editorial board in charge of surgical pathology of the American Journal of Cancer, of the advisory board of the Radiological Research Institute; Medical and Chirurgial Faculty of Maryland; American Surgical Association, Society of Clinical Surgery; American Medical Association; American Association of Pathologists and Bacteriologists, American Association for Cancer Research; American Society for the Control of Cancer, Radiology Society of North America; American Public Health Association; American Association of Hospital Social Workers; and Deutsche Gesellschaft für Chirurgie.

BLOSSOM, HAROLD HILL. American landscape architect, died at West Roxbury, Mass., Dec. 3, 1935. Born in Brooklyn, N. Y., Oct. 6, 1879, he received the B.S. degree from Amherst College in 1902, the M.A. degree in 1906, and the Master in Landscape Architecture degree in 1907, both from Harvard University. In the latter year he became associated with Olmstead Brothers, landscape architects in Brookline, Mass., and during his 12-year connection with the firm worked on the Atlantic and Pacific coasts. During this period he was assistant in landscape architecture to the Alaska-Yukon-Pacific Exposition at Seattle in 1908, and the Panama-California International Exposition of 1915. In 1919 he opened his own office in Boston, Mass., where he specialized in gardens and country estates. During 1926-27 he lectured at the Lowthorpe School of Landscape Architecture, Groton, Mass., and at the Cambridge School of Domestic Architecture and Landscape Architecture. In 1923 he was landscape engineer of the Connecticut Valley Park Commission, and in 1924, a member of the Connecticut Valley Regional Planning Board, by appointment of the governor of Massachusetts. Mr. Blossom received the Medal of Honor in landscape architecture from the Architectural League of New York in 1923. In the summer of 1932, he was an instructor in landscape architecture at Harvard University. A former president of the Boston Society of Landscape Architects and a Fellow of the American Society of Landscape Architects, also he was a member of the Architectural League of New York.

BOMPARD, MAURICE. French diplomat, died at Grasse, Apr. 8, 1935. Born at Metz, May 17, 1854, he received his education at the Collège de Saint Clément. Entering the administrative service he was assigned to the Préfecture of the Nord at Lille under the late M. Paul Cambon. When the latter went to Tunis Bompard went with him, and later became Secretary General of the Tunis Government. In 1889 he was named Resident General for Madagascar. Three years later he entered the Ministry of Foreign Affairs and became a department director. After serving as Minister to Montenegro for a brief period, he returned to Paris and became Director and Administrator of the Consular Service. In 1902 he was appointed Ambassador to Russia and remained there until 1907 when he was recalled because of friction between Russia and France over the latter's declaration of neutrality in the Russo-Japanese War. In 1909 he was named Ambassador to Turkey and while in that office faced the problems of the war between Turkey and Italy, the two Balkan Wars, and the German attitude before the World War. In 1914 diplomatic relations were broken off and he was called home where he served the Ministry of Foreign Affairs in an advisory capacity. He was selected head of the French delegation to the Lausanne Peace Conference in 1922 and 1923 as an expert on Turkish questions. From 1920 to his retirement in 1932, M. Bompard had been Senator for the Department of Moselle. His publications include: *La Législation de la Tunisie*; *La Politique marocaine de l'Allemagne*; *Le Traité de Björkoe*; and *L'entrée en guerre de la Turquie*.

BOSANQUET, ROBERT CARL. English archaeologist, died at Newcastle, Apr. 21, 1935. Born June 7, 1871, he received his education at Eton and Trinity College, Cambridge, and was Craven traveling student during 1895-97. In 1898 he excavated at Housesteads on the Roman Wall in Britain and, after acting as assistant director of the British School at Athens in 1899, served during 1900-06 as director. During his incumbency there he made such important discoveries as the temples of Artemis and Orthia, and Athena Chalkoikos and inscriptions that helped prove the dates of various events in Spartan history. His discoveries also helped to approximate the date of the Dorian arrival in the early part of the Age of Iron. A director of the Cretan Exploration fund, he supervised diggings in Crete in 1901 and in Laconia during 1905-06. Named to the chair of classical archaeology at the University of Liverpool in 1906, he retained the post until 1920. In 1916 he was an agent of the Serbian Relief Fund in Albania and Corfu and the following year in Macedonia. A member of the Royal Commission on Ancient Monuments in Wales and Monmouthshire, he also served on the Advisory Board on Ancient Monuments in England. In later years Mr. Bosanquet had devoted his time to farming and Romano-British archaeology. He was the author of *Borcovicium* (1904); *Phylakopi* (co-author, 1904); and papers in the

Annual of the British School at Athens, the *Journal of Hellenic Studies*, and the *Edinburgh and Quarterly Reviews*.

BOURGET, PAUL, died Dec. 24, 1935.

BOURNE, FRANCIS, CARDINAL, died Jan. 1, 1935.

BOWEN, CLARENCE WINTHROP. American publisher and historian, died at Woodstock, Conn., Nov. 2, 1935. Born in Brooklyn, N. Y., May 22, 1852, he graduated from Yale University with the A.B. degree in 1873, receiving the Ph.D. degree from that institution in 1882. After graduation he was stationed in Canada as correspondent for the New York Tribune and in 1875, joined the staff of his father's paper, the New York Independent—a religious journal—as European correspondent. He was the first to propose a celebration of the anniversary of the discovery of America, and while abroad, interviewed such personages as King Alphonso XIII of Spain, and the Duke of Veragua, a descendant of Columbus, in connection with the celebration. His efforts resulted in the Chicago Exposition of 1893. Three years later his father died and he became publisher of the Independent. He was active in that capacity until 1912 when he retired and devoted his time to writing. Dr. Bowen was a founder of the Yale University Club in 1880, Wolf's Head Society at Yale in 1883; American Historical Association in 1884; and the Manhattan Congregational Church in New York in 1896. He was treasurer of the American Historical Association during 1884-1917; president of the New York Genealogical and Biographical Society during 1907-31; president of the New England Society of New York during 1920-22; vice president of the Connecticut Historical Society and the American Anti-Quarian Society, corresponding member of the Rhode Island Historical Society and the Colonial Society of Boston, and member of the executive board of the Grant Monument Association. Dr. Bowen's publications include: *Boundary Disputes of Connecticut* (1882); *Woodstock, an Historical Sketch* (1887); *Memorial of Centennial of Washington's Inauguration* (1892); *History of Woodstock, Conn.* (1926), and *Genealogies of Woodstock Families* (6 vols., 1930-34).

BOYD, THOMAS (ALEXANDER). American author, died in Ridgefield, Conn., Jan. 27, 1935. Born in Defiance, Ohio, July 3, 1898, he was educated in the public schools there and left high school on the entrance of the United States into the World War to enlist in the Marine Corps. He served overseas throughout the War, and received the Croix de Guerre for Valor. He was honorably discharged, July 10, 1919. On his return to civilian life, he turned to newspaper work, and when his first novel was published in 1923, was serving as literary critic of the St. Paul News. This first novel, *Through the Wheat*, related to the War as seen through the eyes of a young American soldier. Then followed *The Dark Cloud* in 1924, another War novel, and *Points of Honor* (war stories, 1925); *Simon Girty, the White Savage* (1928); *Shadow of the Long Knives* (1928), and *In Time of Peace*, continuing the story of Sergeant Hicks, hero of his first novel, published posthumously in 1935. He also wrote biographies of *Samuel Drummond* (1925); *Mad Anthony Wayne* (1929); *Lighthorse Harry Lee* (1931), and *Poor John Fitch, Inventor of the Steamboat*, published posthumously in 1935.

BOYD, WILLIAM HENRY. American actor, died in Los Angeles, Calif., Mar. 20, 1935. Born in New York City about 1890, he attended the University of Virginia, and returned to New York where he decided upon a theatrical career. He joined a show at Brighton Beach, known as the *Boer War*, in which he played the part of a wild rider. When this show went to the St. Louis Fair, Boyd remained with it and on his return to New York in 1904, played the same rôle at the New York Hippodrome. He made his stage debut in *Peter Pan* with Maude Adams in 1905. Together with many appearances in stock companies, he played in *Get Rich Quick Wallingford* (1912); *Stop Thief* (1913); *Beverley's Balance* with Margaret Anglin (1915); *Our Mrs. McChesney* with Ethel Barrymore (1916); *The Fugitive* (1917); *A Kiss for Cinderella* with Maude Adams (1918); *Poker Ranch* (1920); *The Sporting Thing to Do* with Emily Stevens (1923); and his greatest success, as Sergeant Quirt in *What Price Glory* (1924). Before entering the motion picture field, he appeared in *Tenth Avenue* and *The Lady Lies*. The motion pictures in which he appeared include *The Benson Murder Case*, *The Spoilers*, *Derelict*, *Gun Smoke*, *City Streets*, *Murder by the Clock*, *The Road to Reno*, *State's Attorney*, *The House on Fifty-sixth Street*, *Transatlantic Merry Go Round*, and *The Lost City*.

BRADY, WILLIAM A., Jr. American theatrical producer, died at Colt's Neck, N. J., Sept. 26, 1935. Born in New York City in 1900, he attended Lawrenceville School and then chose a career in the theatre. Returning to New York he became associated with his father, and learned the fundamentals of theatrical production. His first efforts were *The Enchanted Cottage* and *Chains* in 1923. Then came *Nerves* the following year, and in 1925, he formed a partnership with Dwight Deere Wiman. Their first presentation was *Ostriches*, followed by *Lucky Sam McCarver* and *It All Depends*. In 1926 they produced *Little Elyot*, *The Masque of Venice*; *Devils*; *Seed of the Brute*, and *Hangman's House*. They became recognized with *The Road*

to *Rome* with Jane Cowl which opened in January, 1927, and which was followed by *The Dark*, and *The House of Shadows*. In the fall of the same year they presented *Women Go On Forever* with Mary Boland, and *The Command to Love*. After sponsoring Jane Cowl in *The Jealous Moon* and *Paolo and Francesca*, they produced *The Grey Fox*, *Judas*, and *A Most Immoral Lady* with Alice Brady. In April, 1929, they opened the *Little Show* at the Music Box Theatre, and inaugurated something new in revues. *The Second Little Show* appeared in 1930 and then the partnership was dissolved. Mr. Brady began producing independently, offering a revival of *Little Women* in 1931, and *We Are No Longer Children* in 1932. His last plays were *Hangman's Whip*, which he presented with George Kondeff, and *Too Many Boats*.

BRAINARD, CLINTON TYLER, American publisher, died at Winthrop, Me., Sept. 3, 1935. Born in Denver, Colo., Apr. 3, 1865, he was graduated from Harvard University with the A.B. degree in 1890. For the next five years he was engaged in the practice of law in Omaha, Neb., and at Creede and Cripple Creek, Colo. He entered the publishing business in 1895 with his own firm, the C. T. Brainard Company, in New York, and was next associated with H. L. Chapman in the *Mountford Press*, Boston, and with the Harcourt Bindery. In 1909 he became a member of Pearson's Publishing Co., and two years later, president and treasurer of the McClure Newspaper Syndicate, a post he held at the time of his death. During his incumbency of the latter position, he was credited with developing the organization into one of the most important of its kind. In connection with the McClure Syndicate, he served as editor of the *Washington (D.C.) Herald*, and as president of its publishing company from 1915 to 1919, when it was sold. In 1922 he succeeded in purchasing exclusive publishing rights to the memoirs of Kaiser Wilhelm II for which he paid \$250,000, and those of Herbert Henry Asquith, former premier of Great Britain. From 1915 to 1924, Mr. Brainard was president and treasurer of Harper and Brothers, publishers, and from 1916, of the Wheeler Newspaper Syndicate.

BRASLAU, SOPHIE, American contralto, died Dec. 22, 1935, in New York City where she was born, Aug. 16, 1892. She received a private education and then studied singing under Buzzzi-Peccia and Sibella. In November, 1913, she made her debut at the New York Metropolitan Opera House when she sang the rôle of Prince Feodor in *Boris Godunov*. From the time of her debut until 1920, when she took up concert work, she was a member of the Metropolitan Opera Company. In her concert work she was soloist with many symphony orchestras. Her most important operatic part was the title rôle in *Shanewis*. She sang leading contralto rôles in many operas and her repertoire consisted of concert programmes in many languages.

BRAUER, GEORGE RUGER, American clergyman, died in Englewood, N. J., May 3, 1935. Born in Newark, N. J., Feb. 20, 1871, he received his education at Columbia University, the Union Theological Seminary, and the University of Berlin. Two years after his ordination to the ministry of the Presbyterian Church in 1896, he was appointed missionary to the Adirondack Mission and during 1901-02 served as assistant pastor of the Rutgers Riverside Church in New York. From 1903 to 1910 he was pastor of the Setauket and Stony Brook Churches in Long Island, and in the latter year, took up the post of office secretary and treasurer of the College Board of the Presbyterian Church. From 1915 he was treasurer of the Church Election Fund Board of the Presbyterian Church, treasurer of the Gospel Mission to the Tombs in New York from 1916, secretary and treasurer of the Apostolic Institute of the Near East from 1918, and from 1924, custodian of mission property on the Board of National Missions, in charge of property in the United States, Alaska, Cuba, and Puerto Rico. Among other offices that he held were those of acting president of the World Association for Daily Vacation Bible Schools, and treasurer of the Home and Foreign Extension Funds and of the Daily Vacation Bible School Council. He was a member of the Clergy Association of New York.

BREASTED, JAMES HENRY, died Dec. 2, 1935.

BREVAL, LUCIENNE (BRENNERWALD), French opera singer, died in Paris, Aug. 15, 1935. Born at Mannedorf, Switzerland, Nov. 4, 1870, she studied music in Lausanne, Geneva, and in Paris at the Paris Conservatory under Warot, d'Obin, and Giraudet. She won first prize for opera in 1890, and made her debut at the Paris Opéra as Selika in *L'Africaine* in January, 1892. From the latter date she was the principal dramatic soprano of the Paris Opéra, save for two seasons during 1900-02 when she appeared in the United States and at Covent Garden, London. Mme. Bréval's repertoire consisted of almost 50 rôles, including Carmen, Salomé, Salammbô, and Aida. She sang in Holmes's *La Montagne noire* (1895); Guiraud's *Frédérigo* (1895); Vidal's *Burgonde* (1898); Massenet's *Grise-lidis* (1901); Erlanger's *Fils de l'étoile* (1904); Dukas's *Ariane et Barbe-Bleue* (1907); Massenet's *Bacchus* (1909); and Bloch's *Macbeth* (1910).

BRIDGEMAN, WILLIAM CLIVE BRIDGEMAN, First Viscount, of Leigh, died Aug. 14, 1935.

BROUGH, CHARLES HILLMAN, American administrator,

died in Washington, D. C., Dec. 26, 1935. Born at Clinton, Miss., July 9, 1876, he received the A.B. degree from Mississippi College (Clinton, Miss.) in 1893, and the Ph.D. degree from Johns Hopkins University in 1898. The following year he began his career as professor of history and economics at Mississippi College where he remained until 1901. Two years later he went over to Hillman College where he occupied the same chair for one year. He then accepted a call from the University of Arkansas to serve as professor of economics and sociology. He held that post until 1916. He entered politics the following year and was elected governor of Arkansas. He served in that capacity for two terms ending 1921. On the termination of his gubernatorial duties, he resumed his educational work, taking up a lecturing post at the University of Arkansas. However, he resigned the latter in 1932 to become agent for the Mutual Life Insurance Company of New York. The following year he was called to Washington where he served as chairman of the Virginia-District of Columbia Boundary Commission. Besides holding directorates in many companies, Dr. Brough was president of the Arkansas State Teachers Association (1913); the Southern Sociological Congress (1916-18); and the U.S. Good Roads Association (1919-24). His publications included *Irrigation in Utah* (1898) and *Studies in State Taxation* (1901).

BROWN, JAMES, American financier, died June 9, 1935, in New York City, where he was born, Apr. 28, 1863. He received his early education abroad and on his return to the United States, attended Columbia University. On his graduation in 1883 with the Bachelor of Science degree, he entered the banking business, and subsequently became a senior partner in the firm of Brown Brothers, Harriman, and Company. Mr. Brown negotiated the loan to the Republic of Nicaragua at the request of the United States Secretary of State in 1912, hoping to instigate a reform of that country's currency. Also, he organized a State bank there, served as president of Nicaragua's National Bank, and rebuilt the Pacific Railway. Later he was made a permanent member of the American Commission of the original Pan American Congress held in Washington, and chairman of the Committee for the Republic of Panama. During the World War he served his country in important financial negotiations with foreign nations. When he visited England in 1914, he represented the American bankers' committee in conferences with leading English financial officials. He was active in arranging the Dollar Commercial Export Syndicate Credits and also helped negotiate the \$500,000,000 joint loan for England and France. In 1922 he helped organize the Port of New York Authority, particularly in the phase of operating finances. From 1913 Mr. Brown was a leader in the Chamber of Commerce of the State of New York, and from 1924 to 1927, president of the British Empire Chamber of Commerce in the United States. In 1932 he was elected president of the New York State Chamber of Commerce and, while in that chair, advocated the reduction of municipal taxes. He held this office for two years. Also, he was a member of the Chamber of Commerce of the United States of America. A member of the executive committee of the Central Hanover Bank and Trust Company of New York, he held a similar post in the J. G. White Engineering Corporation. He was a trustee of the Atlantic Mutual Insurance Company, the Sun Insurance Company, Ltd. of London, the Northern Insurance Company, Ltd. of London, vice president of the Bangor and Aroostook Railroad, and a director and member of the finance committee of the Commercial Pacific Cable Company. Mr. Brown was a member of the Legion of Honor of France, Commander of the Order of the King of Rumania, a member of the American Academy of Political and Social Science, the Council of Foreign Relations, the Metropolitan Museum of Art, and the Alliance Française of New York.

BROWN, JOHN McMILLAN, Australasian educator and scientist, died at Wellington, New Zealand, Jan. 18, 1935. Born at Irvine, Scotland, in 1846, he attended Irvine Academy, Glasgow University, and Balliol College, Oxford. Shortly after the opening of the newly-formed Canterbury University College, in 1873, Professor Brown was invited to occupy the chair of English there and accepted. In 1885 he was offered a new English Literature Chair founded by Merton College, Oxford, but he declined the offer, preferring to retain his New Zealand post. In 1923 he was made chancellor of the University of New Zealand, becoming professor emeritus at Canterbury University College. Professor Brown devoted a great deal of his time to the investigations of Pacific Ocean problems, and maintained that Easter Island had at one time been the centre of an extensive empire, which he believed disappeared in the 17th century. His writings included seven separate series of lectures on Shakespeare's *The Merchant of Venice* and *Julius Caesar*, on Thackeray's *Henry Esmond*, on Carlyle's *Sartor Resartus*, on Shelley's *Prometheus Unbound* and *Adonais*, and on Milton's *Samson Agonistes*, *A Manual of English Literature (The Era of Expansion, 1750-1850)*, *Modern Education, Its Defects and Their Remedies*, *Riallato*, a satire on modern civilization; *Limanora*, a scientific reconstruction of society (published under a pseudonym in America); *Maori and Polynesian; The*

Dutch East; The Riddle of the Pacific, and Peoples and Problems of the Pacific (1927).

BROWNSON, REAR ADMIRAL WILLARD HERBERT, U.S.N., RET. American naval officer, died in Washington, D. C., Mar. 16, 1935. Born at Lyons, N. Y., July 8, 1845, he was graduated from the United States Naval Academy in 1865, and then was assigned to the flagship of the North Atlantic squadron. In 1868 Brownson was transferred to the Pacific station, but three years later returned to the Naval Academy. Appointed to the Coast Survey in 1882 he conducted deep sea investigations until 1884. After serving as inspector of hydrography from 1885 to 1889, he returned to sea duty as commander of the *Petrel* (1889-91). He was on board the *Dolphin* in 1892 and during the revolution in Brazil (1893-94), on the *Detroit* at Rio de Janeiro. Previous to his serving on the Board of Inspection and Survey during 1896-98, he had been commandant of cadets at the Naval Academy in 1894. During the Spanish-American War he was commanding officer on the *Yankee* and was promoted to the rank of captain in 1899. From 1900 to 1902 he commanded the *Alabama* and then returned to the Naval Academy in the capacity of Superintendent. He retained this post until 1906. In the meantime (1905) he had been promoted to rear admiral and with that rank commanded the Fourth Division of the Atlantic Fleet in 1906. In the latter part of the same year his command was transferred to a special service squadron. From commander-in-chief of the Asiatic Fleet during 1906-07 he became chief of the Bureau of Navigation. Although retired in July, 1907, he was kept on active duty in that Bureau by order of President Theodore Roosevelt. Following a disagreement with the President over the assignment of a medical officer as commander of a hospital ship, he handed in his resignation in December, 1907.

BRUNE, ADOLF GERHARD American composer, died in Chicago, Ill., Apr. 21, 1935. Born in Bakkum, Germany, June 21, 1870, he received his early musical instruction from his father and later studied the organ with E. Brennecke in Osnabrück. On coming to the United States in 1889, he settled in Peoria, Ill., where he became organist of St. Joseph's Church and the Cathedral. He removed to Chicago in 1894 where he studied piano-playing under E. Liebling and composition under B. Ziehn. From 1898 he served as instructor in musical theory and piano at the Chicago Musical College, and held teaching posts at the Columbia School of Music in Chicago, the Wisconsin Conservatory of Music at Milwaukee, and the Racine Musical College. Mr. Brune was former associate musical editor of the Chicago *Inter-Ocean*. Shortly before his death the Chicago Symphony Orchestra played *At Bernine Falls*, his last composition. He composed 4 symphonies (E flat, E minor, D, and A); 3 symphonic poems, *Lied des Sing-schwans*, *Evangeline*, *Ein Dämmerungsbild*; 4 overtures, *Symphonic Fantasy* in C; variations on a theme by Beethoven; *A Fairy Tale*; 2 concertos for piano and orchestra in C minor and F minor; a concerto for organ and orchestra in E flat minor; *Jerusalem*, a cantata for mixed voices and orchestra; 2 male choruses with orchestra, *Sungers Fluch* and *Saxons' War Song*; a mass, six parts; a cappella; Psalm 84 for ten parts; 6 string quartets; 2 string quintets; a string sextet; and numerous works for the organ and piano.

BRYAN, NATHAN PHILOMEN. American jurist, died at Jacksonville, Fla., Aug. 8, 1935. Born in Orange (now Lake) Co., Fla., Apr. 23, 1872, he was graduated in law from Washington and Lee University in 1895. Admitted to the Florida bar in the latter year he practiced alone in Jacksonville until 1899 when his brother, William James Bryan, joined him as junior partner. In 1905 he was appointed chairman of the board of control of the Florida State Institutions of Higher Education, and held the post for four years. The firm of Bryan and Bryan was active until 1907 when William was appointed to the United States Senate. He died, however, after three months in office, and Nathan was urged to take his place. Despite the latter's objections, he was appointed in February, 1911, and the following month was elected as a Democrat for the term 1911-17. Defeated for reelection in the latter year, he resumed his law practice, and in 1920 was appointed a judge of the Fifth Judicial Circuit of the United States Circuit Court of Appeals by President Wilson. Judge Bryan held this post at the time of his death.

BUCCLEUCH, JOHN CHARLES MONTAGU-DOUGLAS-SCOTT, SEVENTH DUKE OF SCOTLAND peer, died at Selkirk, Scotland, Oct. 19, 1935. Born in London, Mar. 30, 1864, he entered the Royal Navy as a cadet in 1877, becoming midshipman on the *Bacchante* in 1879, and lieutenant in 1883. Three years later he left the Navy to attend Christ Church College, Oxford. In 1895 he was elected Unionist Member of Parliament for Roxburghshire, and represented that constituency until 1906. He succeeded to the title on the death of his father in 1914 and, since 1915 had been Lord Lieutenant of Dumfriesshire. In 1926 he was named Lord Clerk Register of Scotland and Keeper of the Signet and three years later, was appointed Captain General of the Royal Company of Archers, the King's Body Guard for Scotland. Created Knight of the Order of the Thistle in 1917, he was made Knight Grand Cross of the Royal Victorian Order in 1934.

BUCKLE, GEORGE EARLE, died Mar. 13, 1935.

BULLOCK, SHAN F. English author, died at Chead, Surrey, Feb. 27, 1935. Born at Crom, Fermanagh, Ulster, May 17, 1865, he was educated at Farra School in Westmeath, and subsequently moved to England. He served as a clerk in the British Record Office at Somerset House for many years. His works dealt largely with life in Ulster, and were considered remarkable for their faithful delineation of Irish life. He was elected to the Irish Academy of Letters to succeed George Moore. His publications included: *The Atkward Squads* (1893); *By Thrasna River* (1895); *Ring o' Rushes* (1896); *The Chormer* (1897); *The Barrys* (1899); *Irish Pastorals* (1901); *The Squireen* (1903); *The Red Leaguers* (1904); *Dan the Dollar* (1905); *The Cubs* (1906); *Robert Thorne* (1907); *A Laughing Matter* (1908); *Master John* (1909); *Hetty* (1911); *Thomas Andrews, Ship-builder* (1912); *The Race of Castlebar* (with Miss Lawless, 1913); *The Making of a Soldier* (1916); *Mr. Ruby Jumps the Traces* (1917); *Mors et Vita* (1923); *The Loughsiders* (1924); *Gleanings* (1926); and his autobiography, *After Sixty Years* (1931).

BURKITT, FRANCIS CRAWFORD, English theologian, died May 11, 1935, in London, where he was born, Sept. 3, 1864. He received his education at Harrow and Trinity College, Cambridge. During 1904-05 he was lecturer in paleography at Cambridge University and from 1905 Norrissian Professor of Divinity there. Dr. Burkitt contended that Matthew's and Luke's Gospels are based on Mark and defended the general accuracy of Mark. His publications included *The Rules of Tyconius* (1894); *The Old Latin and the Itala* (1896); *Fragments of Aquila* (1897); *The Hymn of Bardaisan* (1899); *Early Christianity outside the Roman Empire* (1899); *Two Lectures on the Gospels* (1900); *The Gospel Quotations of S. Ephraim* (1901); *Early Eastern Christianity* (1904, Ger. trans. *Urchristentum im Orient*, 1906); *Evangelion da-Mepharreshe* (1904); *The Gospel History and Its Transmission* (1906, 3d ed., 1911); *Farthest Sources for the Life of Jesus* (1910, 2d ed., 1922); *The Failure of Liberal Christianity* (1910); *Syriac Forms of New Testament Proper Names* (1912); *Euphemia and the Geth* (1913); *Jewish and Christian Apocalypses* (Schweich Lectures, 1914); *Some Thoughts on the Athanasian Creed* (1916); *Three Hymns for Whitsuntide* (words and music, 1920); *Eucharist and Sacrifice* (1921, 2d ed., 1927); *Ecclesiastes* (verse, 1922); *The Early Syriac Lectionary System* (1923); *Christian Beginnings* (1924); *Donnellan Lectures on the Religion of Manichees* (1924); *Song of Brother Sun* (verse, 1926); *Christian Worship* (1930); *Church and Gnosis* (Morse Lectures, New York, 1932); *Jesus Christ An Historical Outline* (1932). He also contributed articles to the following: *Journal of Theological Studies* and the *Interpreter*; *Encyclopaedia Biblica* (1903); *Anglican Liberalism* (1908); *Cambridge Biblical Essays* (1909); the preface to the English translation of Schweitzer's *Quest of the Historical Jesus* (1910); *Encyclopaedia of Religion and Ethics* (1913); edited C. W. Mitchell's *S. Ephraim's Refutations of Mani* (1921); article in *Miscellanea Ehrle* (1924); *Revue d'Histoire franciscaine* (1925); *An Outline in Christianity* (1926); *Legacy of Israel* (1927); *S. P. C. K. Commentary* (1928); *Christianity in the Light of Modern Knowledge* (1929); *Franciscan Essays* (vol. II, 1932), and to the *Revue Bénédictine* (1934).

BURTON, ALFRED EDGAR, American educator, died in Gloucester, Mass., May 11, 1935. Born at Portland, Me., Mar. 24, 1857, he was graduated from Bowdoin College in 1878. In the following year he joined the United States Coast and Geodetic Survey as draughtsman and topographer. He accepted a call from the Massachusetts Institute of Technology in 1882 and served successively as an instructor, 1882-84; assistant and associate professor, 1884-96; and full professor of topographical engineering since the latter date. In 1902 he became the first dean of the Institute and served in that capacity until 1922 when he was retired as professor emeritus. Professor Burton was a member of the Massachusetts Topographical Survey Commission during 1895-1900 and in 1896 had charge of the expedition to North Greenland. Also, he accompanied the expedition to Washington, Ga., in May, 1900, to witness the eclipse, and the expedition to Sumatra in the following year. From 1905 he had been overseer of Bowdoin College. A Fellow of the American Academy of Arts and Sciences and the American Geographical Society, he was a member of the American Society of Civil Engineers, the Astronomical and Astrophysical Society of America, and the Boston Society of Civil Engineers. Besides editing the reports on the Greenland expedition of 1896-97, and the eclipse expeditions of 1900 and 1902 for the *Technology Quarterly*, he wrote *Pendulum and Magnetic Observations in Greenland* (1897).

BURTON, HENRY, South African statesman, died in London, England, Dec. 25, 1935. Born at Cape Town, South Africa in 1866, he received his education at St. Andrew's College, Grahamstown. Mr. Burton was attorney general in the government of John X. Merriman which was in office at the Cape of Good Hope up to the formation of the Union of South Africa. From 1910 to 1912 he was Minister for Native Affairs in the first cabinet of the Union under General Botha, and for the next eight years served as Minister of Railways and Harbors. He was Minister

of Finance from 1913-15, from 1916-17, and again from 1920-24. In the latter year he was raised to the Privy Council. Mr. Burton was a member of the Imperial War Cabinet in 1918 and the Imperial Conference and Imperial Economic Conference in 1923. Throughout his political career, he was a staunch Imperialist.

BUSH-BROWN, HENRY KIRKE. American sculptor, died in Washington, D. C., Mar. 1, 1935. Born in Ogdensburg, N. Y., Apr. 21, 1857, he received his general education in Newburgh, N. Y., and took up the study of art in 1874 under the tutelage of his uncle, Henry Kirke Brown, one of the most prominent American sculptors of the early school. After working with the latter for 12 years he went to Paris and to Italy for further study. Returning to the United States in 1889 he began work on the group for "The Indian Buffalo Hunt," which was exhibited at the Chicago Exposition in 1893. He then produced the equestrian statues of Gen. G. G. Meade and Gen. John F. Reynolds for the State of Pennsylvania. About a year before his death he completed a bust of the late Henry T. Rainey, former Speaker of the House of Representatives. His other works included the statue of Justinian on the Appellate Court House in New York; the group representing Truth at the Buffalo Exposition (1901); memorial tablet, Relief, at the Union League Club, Philadelphia; the decorative figures in the Hall of Records, New York; the equestrian statue of Gen. Anthony Wayne at Valley Forge, Pa.; memorial arch at Stony Point, N. Y.; memorial fountain at Hudson, N. Y.; Gray reserve statue at the Union League Club, Philadelphia; Mary Jemison statue at Letchworth Park, N. Y.; "The Spirit of '61" at Philadelphia (1911); The Lincoln Memorial at Gettysburg (1911); Union Soldiers' Monument at Charleston, W. Va. (1912); equestrian statue of Gen. John Sedgwick at Gettysburg, Pa.; the portrait bust of Henry Kirke Brown in the Hall of Fame at New York University, and the historical panels for the United States Post Office at Wellsville, N. Y. Mr. Bush-Brown excelled especially in the representation of animal figures which he executed with a high degree of realism. Bush-Brown was a member of the National Sculpture Society, the Architectural League, and the National Arts Club of New York of which he was a former president. Examples of his work may be seen in the Metropolitan Museum in New York, the Atlanta (Ga.) Museum, and the National Museum at Washington, D. C.

BUTLER, SIR RICHARD HARTE KEATINGE. English soldier, died at Shawbury, Shropshire, Apr. 22, 1935. Born Aug. 28, 1870, he received his education at Harrow and the Royal Military College at Sandhurst. In 1890 he joined the Dorsetshire Regiment and nine years later, fought in the South African War with the rank of captain. For his service in the Orange River Colony, the Transvaal, and on the Zululand border, he received the Queen's medal, with five clasps, the King's medal, with two clasps, and was brevetted major. During 1906-10 he was stationed at Aldershot with the rank of brigade major. Previous to his serving as brigade commander in 1914-15, he had been general staff officer, second grade, and during 1915-16, was major general on the General Staff of the First Army. When Haig succeeded Sir John French as commander-in-chief of the British forces in France and Belgium in December, 1915, he was instrumental in having Butler promoted to deputy chief of the General Staff on the Western Front. In the early part of 1918 he was given command of the Third Army Corps, a part of Gough's Fifth Army. He retained the latter command up to the signing of the Armistice. In the following year he received command of the Lowland Division on the Rhine, and in June returned to England where he became a divisional commander at Aldershot. Promoted to the rank of lieutenant colonel, April, 1923, he became General Officer Commanding, Western Command in June, 1924. This post he held up to June, 1928, and resigned from the service the early part of 1929. In recognition of his war services, Sir Richard was dubbed Knight Commander of the Order of St. Michael and St. George, and Knight Commander of the Bath. The French Government created him a Grand Officer of the Legion of Honor, and awarded him its Croix de Guerre. His other decorations included those of the Belgium Croix de Guerre, a commandery in the Order of Leopold, and the Distinguished Service Medal of the United States.

BUTTERFIELD, KENYON LEECH, died Nov. 25, 1935.

BYERLY, WILLIAM ELWOOD. American mathematician, died in Swarthmore, Pa., Dec. 20, 1935. Born at Philadelphia, Pa., Dec. 13, 1849, he received the A.B. degree from Harvard University in 1871 and the Ph.D. degree from the same institution two years later. From 1873 to 1876 he served as assistant professor of mathematics at Cornell University. He then joined Harvard University as associate professor of mathematics and in 1881 became full professor, serving as such until his retirement as professor emeritus in 1913. An early advocate of university teaching for women, Dr. Byerly was the first member of the Harvard faculty to agree to give courses for women, when the Society for the Collegiate Instruction of Women, which later became Radcliffe College, was founded in 1879. He served as chairman of the Academic Board of the College for more than 30 years and was an important factor

in the development of the institution. On the completion of the physics and chemistry laboratory of Radcliffe College in 1933, it was named William Elwood Byerly Hall in his honor. Professor Byerly was the author of *Elements of Differential Calculus* (1879); *Elements of Integral Calculus* (1881); *An Elementary Treatise on Fourier's Series and Spherical, Cylindrical and Ellipsoidal Harmonics* (1893); *Problems in Differential Calculus* (1895); *Generalized Coordinates* (1916), and *Introduction to the Calculus of Variations* (1917).

BYNG, JULIAN (HEDWORTH GEORGE) BYNG, FIRST VICOUNT, OF VIMY, OF THORPE-LE-SOKEN, died June 6, 1935.

CADBURY, DAME ELIZABETH MARY (MRS. GEORGE). English social worker, died Aug. 14, 1935. Born in London, about 1858, she received a private education in Germany and France. She was married to George Cadbury in 1888. From 1919 to 1924 she was city councillor of King's Norton Ward, Birmingham, and from 1925 was president of the National Council of Evangelical Free Churches. Also, for two years, she held the office of president of the National Union of Women Workers, and was Convener of the Peace and League of Nations Sectional Committee of the National Council of Women. Among the other offices she held included president of the Midland Division of the Young Women's Christian Association, vice president of the Rural Housing Association, National Liberal Association and of the Girl Guides Association, chairman of the Bournville Village Trust, and of the Birmingham Education Committee's Hygiene Sub-Committee. Among the honors conferred on Dame Cadbury were the Order of the British Empire in 1918, Justice of the Peace in 1926, and Dame Commander of the Order of the British Empire in 1934. Officer of the Order of the Hospital of St. John of Jerusalem, and the Order of Queen Elizabeth of the Belgians. Dame Cadbury was active in social and educational services, and published many papers on these subjects.

CAETANI, LEONE, DUKE OF SERMONETA. Italian linguist, died a British subject at Vancouver, B. C., Can., Dec. 25, 1935. Born in Rome, Italy, in 1869, he attended the University of Rome where he took the degree in ancient and Oriental languages and history. On the death of his father in 1917 he became head of the Old Roman house of Caetani. He traveled extensively in India, Africa, and the Near East to get material for his book, the *Annali Del' Islam*, a history of Islam in many volumes. This work led to his becoming a member of the Accademia Dei Lincei and the Athenaeum Club of London. Caetani, a prominent member of the Socialist party in the Italian parliament, had command of 11 languages, European and Oriental. During the World War he served as an artillery officer on the Dolomite sector of the Italian front and when Premier Mussolini wanted to reclaim the malaria-infested Pontine marshes, Caetani sold his land to the government and went to Vernon, British Columbia, where he became a British subject.

CAILLE, AUGUSTUS. American pediatricist, died in New York City, Oct. 10, 1935. Born at Madison, Ind., Apr. 1, 1854, he was graduated from the New York College of Pharmacy in 1873 and received the M.D. degree from the University of Wurzburg in 1877, and from the College of Physicians and Surgeons of Columbia University in 1881. He began the practice of medicine in New York in 1878, and from 1890 was professor of children's diseases in the New York Post Graduate Medical School. In 1887 Dr. Caille demonstrated Soxhlet's method of home sterilization for bottles, invented a perforated trocar for use in abdominal puncture and devised a scratch test for persons sensitive to the animal serum used in inoculation. He was a consulting physician to the New York Post Graduate and Lenox Hill Hospitals, the Isabella Home and Hospital, and the Sea Cliff Convalescent Home for Babies. Dr. Caille was a delegate to the International Medical Congress held in Berlin, and was a fellow of the American College of Physicians, which he helped to organize, the New York Academy of Medicine, and of the American Congress on International Medicine. A former president of the American Pediatric Society, he was a member of the New York County and State Medical societies and the American Medical Association. He wrote *Diagnosis and Treatment of Disease* (1906) and *Prevention and Treatment of Disease* (1918).

CAMBON, JULES, died Sept. 19, 1935.

CANA, FRANK RICHARDSON. English author and journalist, died in London, Jan. 9, 1935. Born at Brampton, Huntingdon, in 1865, he was educated at private schools in London, and then joined the Civil Service, being connected with the Ecclesiastical Commission. He later became a member of the editorial staff of the *St. James's Gazette*, and in 1903, began his association with the *Encyclopaedia Britannica*, serving as a departmental head until 1911. After editing the "Woman's Platform" of *The Standard*, he returned to the *Encyclopaedia* in 1914. In 1916 he became a member of the staff of *The Times*, and did much work for the *Times History of the War*, particularly in those sections that dealt with the African campaigns. Also he was consulted by the editors of the section dealing with Africa for the official *History of the War*. A geographer of wide and detailed knowledge, Mr. Cana was

a fellow of the Royal Geographic Society. He contributed to many editions of the *Britannica*, to newspapers and magazines, and published *Boers and British* (1899); *South Africa from the Great Trek to the Union* (1909); *Problems of Exploration: Africa* (1911); *The Sahara in 1915*; *The Great War in Europe*, and *The Peace Settlement* (1921).

CANNAN, EDWIN. English economist, died at Bourne-mouth, Hampshire, Apr. 8, 1935. Born in 1861, he received his education at Clifton and Balliol College, Oxford, and became lecturer at the London School of Economics in 1897. He served in the latter capacity until 1926. Also, during 1907-26, he held the chair of political economy at the University of London, retiring as professor emeritus in the latter year. At the University he had been dean of the faculty of Economics during 1900-04. His publications included: *Elementary Political Economy* (1888, 3d ed., 1903), *History of the Theories of Production and Distribution* (1893, 2d ed., 1903); *The Economic Outlook* (1912); *Wealth* (1914, 3d ed., 1928); *Money* (1918, 7th ed., 1932); *Coal Nationalization* (1919); *The Paper Pound of 1797-1821* (1920), *An Economist's Protest* (1927); *A Review of Economic Theory* (1929); *Modern Currency* (1931), and *Economic Scarcities* (1933). He edited Adam Smith's *Lectures on Justice, Police, Revenue, and Arms* (1896) and his *Inquiry into the Nature and Causes of the Wealth of Nations* (2 vols., 1904). He had been president of the Economics Section of the British Association in 1904 and 1931, and of the Royal Economic Society since 1932.

CAPPS, REAR ADMIRAL WASHINGTON LEE, U.S.N., RET. American naval officer, died at Washington, D. C., May 31, 1935. Born at Portsmouth, Va., Jan. 31, 1864, he was graduated from the United States Naval Academy in 1884. After serving on the *Tennessee* and on the staffs of Rear Admirals Luce and Jouett (1884-86), he was sent abroad on special duty, with the rank of ensign. While abroad he studied naval architecture at the University of Glasgow, and received the B.Sc. degree in 1888. Commissioned assistant naval constructor in the same year, he returned to the United States in 1889 and was assigned to the Navy Department, and then to Cramp's Shipyard, Philadelphia. From the Navy Yard in New York, where he served during 1889-92, he was assigned to the Bureau of Construction and Repair of the Navy Department, remaining until 1895. Promoted to naval constructor in the latter year, he was named superintendent of construction for the Navy at the Union Iron Works in San Francisco, and during 1898-99 was on the staff of Admiral Dewey, Commander-in-Chief of the Asiatic station. After superintending the raising of sunken Spanish warships, he became a member of the Board of Inspection and Survey at Washington where he served during 1899-1901. In the latter year he became head of the construction department of the New York Navy Yard and from 1903 to 1907, was chief constructor of the Navy, and chief of the Bureau of Construction and Repair. Three years after his reappointment to the post in 1907, he resigned and was then given a commission as chief constructor with the rank of rear admiral. In 1909, and again during 1910-11, he was sent abroad to study foreign dockyards. On special duty from 1916 as a member of the Navy Yard Commission, he held the office of president of the Navy Compensation Board from 1917, and of the Naval War Claims Board from 1925. He devoted several months of 1917 to activities connected with the Emergency Fleet Corporation. In 1913 he served as United States Commissioner at the International Maritime Conference held in London and while there, was chairman of the Conference Committee on Safety of Construction. In 1915 he was the Navy Department's delegate to the International Engineering Conference held in San Francisco, and chairman of the section on naval architecture and marine engineering. Although placed on the retired list in 1928, he was kept on active duty. President Wilson awarded him the Navy's Distinguished Service Medal "for exceptionally meritorious services in a position of great responsibility." In 1924 he was specially commended by President Coolidge for his services on the Naval Compensation Board during 1917-24. Admiral Capps was a former president of the Society of Naval Architects and Marine Engineers (1919-21).

CARPENTER, LOUIS GEORGE, died Sept. 12, 1935.

CARSON, BARON (LIFE PEER) OF DUNCAIRN, RT. HON. SIR EDWARD HENRY CARSON, died Oct. 22, 1935.

CASTLE, WILLIAM RICHARDS. Hawaiian lawyer, died June 5, 1935, in Honolulu where he was born, Mar. 19, 1849. He received the LL.B. degree from the Columbia Law School in 1873, and on his admittance to the bar, practiced in New York City for three years. He returned to Honolulu and became, in February, 1876, attorney general of the Kingdom of Hawaii. He served in the latter capacity for 10 months. In 1878 he was a member of the Hawaii Legislature, and again served in 1886, 1887, and 1888, acting as its president in the last two years. In 1893 he was annexation commissioner sent by Hawaii to Washington, and two years later, he was named Hawaiian Minister resident in Washington, D. C. On his return to Honolulu the following year, he was elected president of the Board of Education of the Republic of Hawaii, and while in office, instituted many educational reforms. Castle was a member

of the Hawaiian Bar Association, the American Bar Association, and the National Municipal League.

CAVANAUGH, JOHN WILLIAM. American Roman Catholic clergyman and educator, died at South Bend, Ind., Mar. 22, 1935. Born at Leetonia, Ohio, May 21, 1870, he took the Litt.B. degree at Notre Dame University in 1890. In the same year he served as professor of English in the freshman class at Notre Dame. Ordained to the priesthood in 1894, he served as associate editor of *Ave Maria* from 1894 to 1905, Rector of Holy Cross Seminary from 1898 to 1905, and professor of English literature from 1902 to 1906. He was named president of the University of Notre Dame in 1905 and held that office until 1919. During his incumbency of the latter post he effected important changes at the University, and increased the enrollment by several hundreds. He revised study programmes, added three new degrees, and erected new buildings. During 1919-20 he was professor of special English at Holy Cross College, Brookland, D. C., and then returned to Notre Dame as professor of English in 1920. He retained the latter chair until 1931. Father Cavanaugh was appointed chairman of the Compliance Board of the NRA, and appointed by the governor of Indiana, chairman of the State Commission of Liquor Control. Also, he was a member of the Rhodes Scholarship Commission for Indiana. He wrote *Priests of Holy Cross* (1904), *The Modesty of Culture* (1931), and edited the *Biography of Knute K. Rockne* (1931).

CHALMERS, STEPHEN. American author, died at Santa Ana, Calif., Dec. 14, 1935. Born at Dunoon, Scotland, Feb. 29, 1880, he was educated at the Dunoon Grammar School. In 1898 he went to Jamaica, W. I., and three years later became sub-editor of the *Kingston Daily Gleaner*. In 1902 he came to New York and served on the staff of the *New York Times* until 1906. Mr. Chalmers helped found the Stevenson Society of America and the Stevenson Fellowship of Los Angeles. He was a member of the Authors' League of America, League of Western Writers, and the Izaak Walton League. Besides contributing to several magazines, he wrote *The Vanishing Smuggler* (1909); *When Love Calls Men to Arms* (1910), *The Trail of a Tenderfoot* (1911), *A Prince of Romance* (1911); *Footloose and Free* (1912), *The Beloved Physician—Edward Livingston Trudeau* (1915), *The Penny Piper of Saranac* (1916); *Enchanted Cigarettes* (1917); *The Greater Punishment* (1920), *Don Quixshot* (1922), *Looking for Trouble* (1926), *The Hermit Thrush* (verse, 1927), *House of the Two Green Eyes* (1928); *Crime in Car 13* (1930), *The Affair of the Gallows Tree* (1931), *The Whispering Ghost* (1932), *Blood on the Heather* (1933), and *Campobello Days with F. I. R.* (1933).

CHAMBERLAIN, BASIL HALL. English scholar and Orientalist, died at Geneva, Feb. 14, 1935. Born at Southsea, England, Oct. 18, 1850, he was educated in France and England. After teaching at the Imperial University of Tokyo for 40 years, he retired as professor emeritus of Japanese and Philology. His combination of scholarship with a light and interesting style is perhaps most evident in his *Things Japanese* (1890, 6th ed., 1927, French trans., 1930). His other works include: *The Classical Poetry of the Japanese* (1880); *Translation of the *Kokin** (1883); *The Language, Mythology, and Geographical Nomenclature of Japan in the Light of Aino Studies* (1887), *Aino Folk Tales* (1888), *Lichuan Grammar* (1895), *Practical Introduction to the Study of Japanese Writing* (2d ed., 1905), *Handbook of Colloquial Japanese* (4th ed., 1907); *Murray's Japan* (1891, 9th ed., 1913, with W. B. Mason); *Japanese Poetry* (1910), *Huit Siècles de Poésie Française* (1927), *Encore est vive la Louisie* (1933); volumes in the *Japanese Fairy Tale Series*, and contributions to the *Transactions of the Asiatic Society of Japan* and of other Oriental societies.

CHAMBERLIN, JOSEPH EDGAR. American editor, died at South Hanson, Mass., July 6, 1935. Born at Newbury, Vt., Aug. 6, 1851, he received his education in Wisconsin, and became associated with the *Chicago Times* in 1871, on which he rose to the post of managing editor. Ten years later he went over to the *Newport (R. I.) Daily News* as editor and remained there until 1882. He was then associated successively with the *Fall River (Mass.) Daily Herald* (1882-84), the *Boston Record* (1884-86), and was a member of the *Boston Transcript* (1886-1901). After serving as assistant editor of the *Youth's Companion* during 1890-1901, he was literary editor, editorial writer, and art critic for the *New York Evening Mail* from 1901 to 1915. In the latter year he returned to the *Boston Transcript* in the capacity of editorial writer and remained with the newspaper until 1933. Mr. Chamberlin also conducted the "Listener" and "Nomad" columns in the *Transcript*. In 1898 he served as war correspondent in Cuba for the *New York Evening Post*. His publications include: *The Listener in the Town* (1896), *The Listener in the Country* (1896); *Life of John Brown* (in the *Beacon Biographies*, 1899); *The Ifs of History* (1907); and *The Boston Transcript—A History of Its First Hundred Years* (1931).

CHAMBERS, HENRY KELLETT. American editor and playwright, died at Great Neck, L. I., N. Y., Sept. 5, 1935. Born in Sydney, Australia, Nov. 28, 1867, he was educated at Newington College, Stanmore, Australia. (On coming to the United States in 1891 he settled in New York. Four years later he went to San Francisco, where he worked

for a time with the Hearst newspapers. Returning to New York in 1896 he became associated with the New York Sun and served as editor of the column, "The Sun's Rays." Mr. Chambers began writing for the stage and had his first play *Abigail* produced by William A. Brady in New York in 1905. His second effort, *A Case of Frenzied Finance*, was also produced by Mr. Brady in the same year, and in 1906, his dramatic version of *David Copperfield* was produced by Charles Cartwright. In the same year *The Butterfly* was produced with Lillian Russell in the leading rôle. His other plays included: *An American Widow* (1909) and *The Right to Be Happy* (1912). Mr. Chambers began his association with *The Literary Digest* in 1926, becoming editor of its *Spice of Life* department. He resigned from the latter position shortly before his death.

CHAMBERS, VICE-ADMIRAL SIR JOSEPH. English surgeon, died at Harrogate, Yorkshire, Sept. 22, 1935. Born in 1864, he received his education at Dublin University, and entered the Royal Navy in 1889 as a surgeon. During the South African War he was medical director of several naval hospitals, and during the World War, served as operating surgeon at the Royal Navy Hospital at Chatham. He was director general of the Medical Department of the Navy from 1923 to 1927 when he retired. In 1925, Sir Joseph acted as honorary physician to the King. Created a Companion of the Order of St. Michael and St. George in 1919, and Companion of the Bath in 1923, he was made Knight Commander of the Bath in 1926. Sir Joseph wrote many articles on surgery.

CHAMPNEYS, BASIL. English architect, died at Hampstead, Apr. 5, 1935. Born at Lichfield, in 1842, he was educated at Charterhouse School and Trinity College, Cambridge, where he won classical honors in 1864. He studied architecture under John Prichard of Llandaff, and began to practice in 1867. He built many important buildings, including the divinity and literary schools of Newnham College, the Archaeological Museum at Cambridge, Somerville and Mansfield Colleges and the Indian Institute and Robinson Tower at New College, Oxford, Butler Museum at Harrow, Rylands Library at Manchester, as well as many churches and schools. Champneys was more concerned over details than he insisted should be historically correct than that they be satisfactory from the formal point of view. He was presented with the Royal Gold Medal by the Royal Institute of British Architects in 1912. He was the author of: *A Quiet Corner of England* (1875), *Henry Merritt Art Criticism and Romance* (1879); *Memoirs and Correspondence of Coventry Patmore* (1900); *Retrospect and Memoir* (1911).

CHANEY, LUCIAN WEST. American biologist and statistician, died at Washington, D. C., May 6, 1935. Born at Heuvelton, N. Y., June 26, 1857, he received his education at Carleton College, Northfield, Minn. From 1879 to 1882 he served as high school principal and superintendent of schools in Faribault and Glencoe, Minn. In the latter capacity he was reputed to have been an early advocate of the use of the laboratory method in biological instruction in Minnesota. Mr. Chaney explored the Rocky Mountains of Montana and visited many glaciers, having one, Chaney Glacier, named in his honor. In 1882 he returned to Carleton College as instructor in biology and became professor of that subject the following year. Largely due to his efforts, the biological department of that institution was advanced to a high degree of perfection and the laboratory greatly improved by the installation of modern equipment. He retired in 1907, and took over the post of special investigator of industrial accidents for the United States Department of Labor. His reports to the latter were embodied in Volume IV of the "Conditions of Employment in the Iron and Steel Industry." He wrote *Guides for the Laboratory* (1886) and was the author of many bulletins of the United States Bureau of Labor. Mr. Chaney was a member of the First and Third National Conferences on Workmen's Compensation, and of the American Academy of Political and Social Science, the American Sociological Association, the Minnesota Academy of Science, and the American Association for Labor Legislation.

CHIDWICK, THE RT. REV. MGR JOHN PATRICK SYLVESTER. American clergyman of the Roman Catholic church, died Jan. 13, 1935, in New York City, where he was born Oct. 23, 1863. He was educated at St. Gabriel's School and Manhattan College, receiving the A. B. degree in 1883 and the A. M. degree in 1885. In 1883 he entered St. Joseph's Seminary at Troy, New York, and on his ordination as a priest in 1887, was assigned to St. Stephen's Church, New York City. Always interested in seamen, Father Chidwick, with three others, founded the Catholic Reading Room for Sailors in New York. In 1895 he was appointed a chaplain in the United States Navy, and three years later was assigned to the U. S. S. *Maine*. When that ship was blown up in Havana Harbor, he took a valiant part in the rescue work that followed and was commended by his Commander and by the Secretary of the Navy. Transferred to the cruiser *Cincinnati*, he served on it to the end of the Spanish-American War, and in November, 1898, returned to the United States. In January of the following year he was named chaplain of the Washington Navy Yard. He later served in the same capacity at the

New York Navy Yard, and on the battleship *New York*. He retired from the Navy in 1903 with the rank of commander. Assigned to St. Ambrose's Church, New York as pastor in 1904, he was appointed a chaplain in the New York Police Department two years later. In 1909 he was named president of St. Joseph's Seminary, now located in Yonkers, New York, and seven years later was made a Monsignor by Pope Pius X. Appointed Irremovable Rector of St. Agnes Church in New York in 1922, he became an Archdiocesan consultant the following year, and in 1924, was named president of the College of New Rochelle, New Rochelle, N. Y.

CHILD, RICHARD WASHBURN, died Jan. 31, 1935.

CIPPICO, COUNT ANTONIO. Italian statesman and author, died in Rome, Jan. 17, 1935. He was born at Zara, Mar. 20, 1877. He served at University College, London as lecturer during 1911-18 and as professor of Italian during 1918-25. In the World War he served with the Italian Army with the rank of lieutenant and won a decoration for valor. After the War he returned to London where he founded the first *Fascio di Combattimento*. He settled in Rome after his nomination as Senator of the Kingdom of Italy in 1923, and served as Italian delegate to the League of Nations Assembly during 1924-28. Also, he was a foreign correspondent of the Royal Literary Society. His publications include: *The Central Problem of the Mediterranean Sea Which Is Italy*; *Carme Umanistico*; *The Romantic Age in Italian Literature*, and translations into Italian of Aeschylus' *Orestia*, of King Lear, of Nietzsche's *Gaia Scienza*, and of poems by Keats, Shelley, and Whitman.

CITROEN, ANDRE GUSTAV, died July 3, 1935.

CLAPP, CHARLES HORACE. American geologist, died at Missoula, Mont., May 9, 1935. Born in Boston, Mass., June 5, 1883, he received the Ph.D. degree from the Massachusetts Institute of Technology in 1910. From 1905 to 1907 he was an instructor in geology and mining at the University of North Dakota, and at the same time, assistant state geologist. He removed to Massachusetts in 1907 and taught there to 1910 as an instructor in geology at the Massachusetts Institute of Technology. During 1908-13, he served with the Geological Survey of Canada. Professor Clapp occupied the chair of geology at the University of Arizona during 1913-16 and for the following five years, held the same chair at the Montana State School of Mines. After serving as president of the latter institution during 1918-21, he was called to the State University of Montana where he was president from 1921. During 1919-22 he was a director and geologist for the Montana Bureau of Mines and Metallurgy, assistant geologist with the U. S. Geological Survey during 1914-25, and a member of the American Association for the Advancement of Science, Geological Society of America, American Institute of Mining and Metallurgical Engineers, and the Montana Society of Engineers. Dr. Clapp was particularly interested in petrology and economic geology and published many papers on the subjects.

CLAPP, CORNELIA MARIA. American zoologist, died at Mount Dora, Fla., Jan. 1, 1935. Born at Montague, Mass., Mar. 17, 1849, she attended Mount Holyoke, Mass., then a girls' seminary, and graduated in 1871. In the following year she became instructor in mathematics there. Being instrumental in the formation of the department of Zoology at Mount Holyoke, in 1896 she was appointed professor and occupied this chair until her retirement as professor emerita in 1916. For years Miss Clapp was associated with Louis Agassiz in his scientific work, and during the summers of 1888-1902, she carried on investigations in the marine biological laboratory at Woods Hole, Mass., where she specialized in research work in embryology. In 1924 a new building, housing the science department at Mount Holyoke, was dedicated as Cornelia Clapp Hall in her honor. She received honorary degrees from the University of Syracuse and the University of Chicago, and was the first woman so honored by the latter institution. Also, she was the only woman trustee of the Marine Biological Station, and a fellow of the Naples, Italy Zoological Station. Her writings consisted of articles in technical journals on the subjects of biology and morphology.

CLARK, KATE UPSON (MRS. EDWARD PERKINS CLARK). American author, died in Brooklyn, N. Y., Feb. 17, 1935. Born at Camden, Ala., Feb. 22, 1851, she was graduated from Wheaton College, Norton, Mass., in 1869 and from the Westfield (Mass.) Normal School in 1872. In that year she accepted the post of teacher in Central High School, Cleveland, Ohio, where she remained a year. In 1874 she was married to Edward Perkins Clark. From 1882 to 1887, Mrs. Clark was the editor of *Good Cheer*, and conducted a department in the Philadelphia Press. Also, from 1892 to 1895, she edited *Romance*. In 1907 she became an editorial writer on the Brooklyn Eagle, as well as acting as literary editor of the Christian Herald and contributing to many magazines and religious weeklies. After the death of her husband in 1903, she began her lecturing career, giving courses at Columbia University, the Brooklyn Academy of Arts and Sciences, and on many of the Chautauqua Circuits. In 1907 she was appointed a trustee of Wheaton College, and was the founder and first president of the Wheaton Club in New York. Also, she helped

found the Women's Republican Club, and the Brooklyn Colony of the National Society of New England Women. She contributed articles to many magazines, including *St. Nicholas*, *Youth's Companion*, and the *Atlantic Monthly*. Her writings in book form included: *Bringing Up Boys* (1900); *White Butterflies* (1900); *How Dexter Paid His Way* (1901); *Up the Witch Brook Road* (1902); *Move Upward* (1902); *The Dole Twins* (1906); *The Adventures of Spotty* (1907); *Art and Citizenship* (1917); and *Teaching the Child Patriotism* (1918).

CODERRE, LOUIS Canadian jurist, died in Montreal, Jan. 30, 1935. Born at St. Ours, Que., Nov. 1, 1865, he received the L.L.B. degree from Laval University in 1892. Called to the bar in the same year, he became a partner in the firm of Primeau and Coderre. In 1904 the partnership was dissolved and he later served with the firms of Coderre, Cedras and Magnan, and Coderre, Fortin and Coderre. He entered politics in 1896 and became city attorney for St. Henri, retaining the post up to 1905. In 1897 he was attorney for Emard and from 1904 to 1910 was syndic of the Montreal bar. An unsuccessful candidate in the elections of 1908, he was elected in 1911 to represent Hochelaga in the House of Commons. Sworn a member of the King's Privy Council for Canada, he took up the post of Secretary of State in October, 1912, in Sir Robert Borden's Cabinet. Also, in February, 1913, he was named Minister of Mines in the same Cabinet. He retained both posts until he resigned in 1915. Later in the same year he was appointed Judge of the Superior Court of Quebec.

COHEN, JOHN SANFORD American editor, died in Atlanta, Ga., May 13, 1935. Born in Augusta, Ga., Feb. 26, 1870, he attended the United States Naval Academy during 1885-86, but resigned in the latter year to enter the field of journalism. His first newspaper experience was obtained on the *Augusta Chronicle*, and after a year or two, he went to Mexico where he joined Capt. William G. Raoul, builder of the Mexican National Railway. He returned to New York and in 1889 served on the staff of the *New York World*. He was in Georgia again in 1890, when he became a member of the staff of the *Atlanta Journal* as a reporter. He became successively political writer, Washington correspondent, chief editorial writer, managing editor, and in 1917, editor and president of the *Atlanta Journal Company*. Also, while in Washington, he served as secretary to Hoke Smith, Secretary of the Interior in President Cleveland's Cabinet. On the outbreak of the Spanish-American War, he became a war correspondent and sailed with Admiral Evans's fleet. Enlisting in the Third Georgia Volunteer Infantry, he was promoted to the rank of major. At the end of the War he served in Cuba with the Army of Occupation. Returning to his post on the *Atlanta Journal*, he helped promote the National Highway from New York City, through Atlanta, to Jacksonville, Fla., which was built under the joint supervision of the *Atlanta Journal* and the *New York Herald*. Also, he helped rebuild the greater Emory University in Atlanta and refound Oglethorpe University. Under his leadership, the *Atlanta Journal* was one of the first Southern newspapers to sponsor a Sunday morning edition, complete with magazine and rotogravure sections. The *Journal's* radiobroadcasting station, which operated under the call letters WSB, was one of the first erected in the South. Mr. Cohen's political activities were confined to the State of Georgia until 1924, when he was elected a Democratic National Committeeman. He held this office until his death. Appointed to the United States Senate by Governor Russell in April, 1932, to fill the vacancy caused by the death of Senator William J. Harris, he served in that capacity until the expiration of the term in 1933. In 1932, he accepted the appointment of vice chairman of the Democratic National Committee.

COHEN, JULIUS BEREND English chemist, died at Coniston, Lancashire, June 14, 1935. Born in Manchester, May 6, 1859, he attended Owens College, Manchester, and entered the works of the Clayton Aniline Company in 1880 where he remained for two years. He then went to Munich and received the Ph.D. degree from the University there. Following his return to Manchester in 1884, he was named demonstrator in chemistry at Victoria University, Manchester. In 1890 he joined the faculty of Yorkshire College where he was lecturer on organic chemistry. When the college became a part of the University of Leeds in 1904, he was invited to occupy the chair of organic chemistry. He held the post up to his retirement in 1924. During the World War Professor Cohen was responsible for the manufacture of many valuable drugs and from 1924 to 1932 served on the Chemotherapy Committee of the Medical Research Committee. In the Chemical Society he held the office of vice president in 1920, 1921, and 1925. Cohen was a member of the Local Government Board Committee on Smoke Abatement and was an associate member of the Chemical Warfare Committee. His publications include *Researches on Organic Chemistry*; *Theoretical Organic Chemistry* (1902); *Practical Organic Chemistry* (1910); *Organic Chemistry for Advanced Students* (2 vols., 1907-13); *Organic Chemistry* (1912); and *Smoke, a Study of Town Air* (1912).

Dr. Cohen was elected a Fellow of the Royal Society in 1911.

COLE, REAR ADMIRAL WILLIAM CAREY, U.S.N., RET. American naval officer, died on Mare Island, San Francisco, Calif., May 28, 1935. Born in Chicago, Ill., Aug. 23, 1868, he was graduated from the United States Naval Academy in 1889. During the Spanish-American War he served on the *Dolphin* and from 1901 to 1905 was chief engineer on the *Massachusetts*. The following two years were spent as inspector of equipment at Camden, N. J. He returned to sea as navigator on the *Kansas* during 1907-09, and as executive officer of the same vessel during 1909-10. Assigned to the naval Academy from 1910 to 1913, he returned to sea as commander of the *Monadnock* (1913) and of the *Helena* (1913-15). In the following year he was stationed in the Boston District as inspector of engineering material. At sea again in 1917, he commanded the *Frederick* and in 1918, the *Nevada*. Assigned to the United States Dutch mission ship in May, 1919, he was then transferred to the Bureau of Operations at the Navy Department in Washington in November, 1919. In April, 1922, he commanded the Special Service Squadron, and in August, 1923, became chief of staff of the United States Fleet. After serving as commandant of the Navy Yard at Norfolk, Va., in 1925, his command was transferred to Battle Ship Division Four of the Battle Fleet during 1928-29. The following year was spent with the Scouting Fleet with the rank of vice admiral and from 1930 to 1932, as commander of the 12th Naval District, San Francisco. He was retired for age on Sept. 1, 1932. Admiral Cole was a member of the Naval Institute, American Society of Naval Engineers, and the American Society of International Law.

COLLIE, SIR JOHN. English physician, died in London, Apr. 4, 1935. Born in 1860, he received his education at Aberdeen University. Elected a member of the London County Council, he served successively as assistant medical officer, medical superintendent of medical classes, and medical examiner and member of the Insurance Committee for London. Also, for a time, he served as an examiner in physiology and hygiene at the British College of Physical Education. During 1913-15 he was a member of the Royal Commission on Venereal Diseases, and during the World War, was named Director of Neurasthenic Institutions by appointment of the Minister of Pensions. At the time of his death he held the office of chief medical officer of the Metropolitan Water Board. Sir John was elected to Parliament in 1922 as National Liberal Member for the Partick Division of Glasgow and served in that capacity for one year. His various other appointments consisted of Director of Medical Services in the Ministry of Pensions, president of the Special Medical Board for Neurasthenia, and Home Office Medical Referee under the Workmen's Compensation Act. Knighted in 1912, he was made a Companion of the Order of St. Michael and St. George in 1918 and was Justice of the Peace for the County of London. His publications include: *Fraud and Its Detection in Accident Insurance Claims* (1912); *Malingering* (1913); *The Psychology of the Fraudulent Mind* (1913); *The Business Side of Medical Practice*; *Fraud in Medico-Legal Practice* (1932); *Workman's Compensation in Its Medical Aspect* (1932); and *Recent Advances in Medicine and Surgery* (1933).

COONTZ, ADMIRAL ROBERT EDWARD, U.S.N., RET., died Jan. 26, 1935.

COOPER, IRVING STEIGER. American bishop of the Old Catholic Church and theosophist, died at Glendale, Calif., Jan. 17, 1935. Born at Santa Barbara, Calif., Mar. 16, 1882, he attended the University of California during 1902-06, and then studied at Adyar, Madras, India. He was national lecturer for the Theosophical Society from 1908 to 1919, and served as national organizing secretary of the Order of the Star in the East from 1912 to 1919. He was ordained a priest of the Old Catholic Church in 1918, and consecrated regionary bishop of the Liberal Catholic Church for the United States the following year. He wrote *Methods of Psychic Development* (1911); *Ways to Perfect Health* (1912); *The Secret of Happiness* (1912); *Theosophy Simplified* (1915); and *Reincarnation, the Hope of the World* (1917).

COOPER, WILLIAM JOHN. American educator, died at Kearney, Neb., Sept. 19, 1935. Born at Sacramento, Calif., Nov. 24, 1882, he was graduated from the University of California in 1906, and became assistant in the Department of History at the University while in his senior year. He taught history and Latin at the Stockton High School during 1907-10, becoming, in the latter year, head of the history department in the Berkeley senior high school and four junior high schools. In 1915 he served as supervisor of social studies in the public schools of Oakland, and was named district superintendent of schools in Piedmont three years later. For five years, 1921-26, he was city superintendent of schools in Fresno, and in 1926, in San Diego. Governor Young appointed him State superintendent of Public Instruction the following year. He served in this capacity until 1929, when he was appointed Commissioner of Education by President Hoover. During his term of office, three national surveys of education were made, viz., the National Survey of Secondary Edu-

cation, the National Survey of the Education of Teachers, and the National Survey of School Finance, which made a profound impression on the educational world, and through his efforts, the Office of Education became more closely cooperated with the National Education Association, the American Council on Education, the National Catholic Welfare Council, and other organizations deeply interested in the advancement of education. Dr. Cooper resigned in 1933 to take up the chair of education at George Washington University. For eight months during 1917-18, he was the business manager of the War Department's Committee on education and special training for the Western States. A regent of the University of California, he also was director of superintendence of the National Education Association, and a member of the Federal Bureau for Vocational Education from 1930 to 1933. Also, he was a member of the American Association for the Advancement of Science, and the American Academy of Political and Social Science. Besides contributing to various periodicals, he wrote *Economy in Education* (1933).

CORMACK, JOHN DEWAR. Scottish engineer, died at Glasgow, Dec. 1, 1935. Born May 15, 1870, he was educated at Dumbarton Academy and Glasgow University. In 1892 he lectured on electrical technology at Yorkshire College, Leeds, and in 1896 became University assistant in engineering and lecturer in electrical engineering at Glasgow University. Invited to occupy the chair of mechanical engineering at University College, London, in 1901 he held the post until 1913, when he became regius professor of Civil Engineering and Mechanics at Glasgow University. In 1901 he was secretary of the International Engineering Congress held in Glasgow, and president of the Institution of Engineers and Shipbuilders in Scotland in 1933. During the World War he was active as chief contracts officer for military aeronautics (1915); and assistant controller of the Aeronautical Supply Department (1917); also, he served as a member of the British Mission to the United States (1917-19). A Fellow of the Royal Aeronautical Society, he was decorated a Chevalier of the Legion of Honor and created a Companion of the British Empire in 1919, and Companion of St. Michael and St. George in 1917.

CORRIGAN, JOSEPH EUGENE. American jurist, died in New York City, Jan. 9, 1935. Born in Newark, N. J., Sept. 16, 1874, he graduated from Seton Hall College, South Orange, N. J., in 1895, and received the LL.B. degree from Columbia University Law School in 1901. Starting practice in New York City in 1903, he served on the staff of the late William Travers Jerome, District Attorney, and in 1907 was appointed city magistrate by Mayor George B. McClellan, serving until 1930, when he was appointed chief magistrate for one year by Mayor James J. Walker. He realized his ambition on Apr. 1, 1931, when he was appointed to the bench of the Court of General Sessions by Gov. Franklin D. Roosevelt. He was reelected to the office in November, 1931, for a term of 14 years.

COSIO, MANUEL BARILOMÉ. See SPANISH LITERATURE.

COWEN, SIR FREDERICK HYMNEN, died Oct. 6, 1935. COY, EDWARD HARRIS (TED). American football star of the flying wedge days, died in New York City, Sept. 8, 1935. Born at Andover, Mass., May 21, 1888, he entered Yale University in 1906, becoming captain and fullback of the freshman team. He was a major factor in many of Yale's victories over Harvard and Princeton. His brilliant playing in 1907 in the 12-10 victory over Princeton, and the 12-0 victory over Harvard, established him as a pre-eminent player. Both Parke Davis and Walter Camp placed him at fullback position on their all-time All-American teams. In his senior year he was elected captain of the team, and in accordance with the prevailing custom, returned to Yale in 1910 as head coach. He then engaged in various commercial activities, until 1915 when he came to New York and joined the brokerage firm of Davies, Thomas, and Company. Four years after his retirement from that company, he went to California where he wrote sports for the San Francisco *News*. Returning to New York in 1930, he became associated with Smyth, Sanford, and Gerard, insurance brokers, and continued the connection up to the time of his death. Mr. Coy was married three times, his second wife being Jeanne Eagles, who came into her greatest prominence as Sadie Thompson in *Rain*.

CRAIG, CHARLES L. American public official, died in Sacramento, Calif., Aug. 6, 1935. Born at Arcola, Ill., Mar. 9, 1872, he was graduated from Washington University in St. Louis. At the age of 28 he came to New York City where he took up the study of law. In 1903 he received the LL.B. degree from the Law School of Columbia University, and on his admittance to the bar, became a partner in the firm of Hoadley, Lauterbach and Johnson. After the dissolution of that firm, he joined James A. Foley in the practice of law. His attacks on the Fusion administration of Mayor John P. Mitchell brought him to the attention of Charles F. Murphy, Tammany Chieftain. As a result, Craig was nominated for city comptroller, along with John F. Hyland for mayor, and Alfred E. Smith for President of the Board of Aldermen. Elected to the post in 1917, Craig aided and abetted Mayor Hyland until

1919, when they came to differences over the 1920 city budget. Reelected to the same office in 1921, he continued to save the city millions of dollars and proceeded to attack other members of the city administration. He was relieved of a jail sentence of 60 days imposed by Federal Judge Julius Mayer for contempt of court, remission of his sentence being authorized by President Coolidge on Dec. 4, 1923. Mayor Hyland, along with the rest of his ticket, was defeated in the Democratic primaries of 1925 and Craig was offered a nomination to the bench of the Supreme Court. He declined the nomination, however, and returned to private practice.

CRAIG, SIR MAURICE. English neurologist, died at East Preston, Sussex, Jan. 6, 1935. Born Mar. 29, 1866, he was educated at Caius College, Cambridge and at Guy's Hospital, affiliated with the University of London. In 1900 he was awarded the Gaskell Gold Medal. Appointed a physician for and a lecturer in Psychological Medicine, and Demonstrator in Psychology in Guy's Hospital two years later, he served until 1926. In that year he became consulting physician in Psychological Medicine, but from 1922 had been Bradshaw Lecturer on Mental Symptoms in Physical Disease at the Royal College of Physicians and Maudsley Lecturer on some aspects of Education and Training in Relation to Mental Disorder. At Cambridge University he held the post of examiner for Diploma in Psychological Medicine. Also, during 1920-22, he served on the War Office Committee on Shell Shock. At the meeting of the British Medical Association in 1925, Sir Maurice also served as president of the Section on Neurology and Psychological Medicine, and at the centenary meeting of the Association held in 1932, was president of the Section on Mental Disorder, and held additional offices in several other medical associations. Sir Maurice was knighted in 1921, and was named a Fellow of the Royal Society of Medicine. He wrote *Nerve Exhaustion* and a textbook on *Psychological Medicine*.

CROISSET, MAURICE. French classical philologist, died Feb. 15, 1935, in Paris where he was born Nov. 20, 1846. He was educated at the Lycée Louis-le-Grand. In 1876 he became professor of the Greek language and literature at Montpellier, and professor of the Greek language and literature at the Collège de France in 1893. He subsequently became a director of the Collège. In 1903 he was elected to the Académie des Inscriptions et Belles-Lettres, and in 1918 became president of the Association Guillaume Budé. Also, he was a grand officer of the Legion of Honor. He wrote *De Publica Eloquentia Principis apud Græcos in Homericis Carminibus* (1874); *Des idées morales dans l'éloquence politique de Démosthène* (1874); *Essai sur la vie et sur les œuvres de Lucien* (1882); *Aristophanes and the Political Parties at Athens* (Eng. trans. by James Loeb, London, 1909), and, in conjunction with Alfred Croiset, *Histoire de la littérature grecque* (5 vols.) and *Manuel d'histoire de la littérature grecque, la civilisation hellénique* (2 vols., 1922); and translated into Spanish, *Homérus' Ia Odyssea* (1921), and collaborated with his brother on a Spanish translation of *Euripides' Tragedias* (1921). Also, he edited and translated the first volume of the *Œuvres Complètes* of Plato, and the *Harangues* of Demosthenes (2 vols., 1924-25). In 1932 he published *La Civilisation de la Grèce Antique*.

CUSTANCE, ADMIRAL SIR REGINALD NEVILLE. English naval officer, died at Broadclyst, Devon, Aug. 30, 1935. Born in Belfast, Ireland, Sept. 20, 1847, he entered the navy in 1860 as a cadet, and served as a midshipman on the *Euryalus* at the capture of Kahding in 1862. Also he was present at the actions of Kagosima in 1863 and of Simnosaki in the following year. Promoted commander in 1878 from the *Excellent*—the gunnery school at Portsmouth—he became a captain in 1885, and with that rank served as assistant Director of Naval Intelligence during 1886-90. The next three years were spent as captain of the *Phaeton*, and from 1893 to 1895 he was naval attaché, serving first at Washington and later at Paris. Again at sea in 1895, he commanded the *Barfleur* in the Mediterranean up to 1898. The following year he was returned to the Naval Intelligence Department, this time as director, serving as such until 1902 when he returned to sea in the *Venerable*, second in command of the Mediterranean Fleet, with the rank of rear admiral. In 1907 he transferred his flag to the *Hibernia* and was second in command of the Channel Fleet. He retired from the Navy in 1912. Sir Reginald was the recipient of the Humane Society's silver medal in 1868 for saving the life of a marine artilleryman who had fallen overboard and was created a companion of St. Michael and St. George in 1900, Companion of the Victorian Order, 1903; Knight Grand Cross of the Bath in 1913. Among other honors conferred upon him were the Sacred Treasure of Japan, first class; and Grand Commander of the Redeemer of Greece. He wrote *War at Sea; Modern Theory and Ancient Practice* (1909) and *A Study of War* (1924).

CUTTING, IRONSON (MURRAY), died May 6, 1935.

CUTTING, STARR WILLARD. American educator and Germanic scholar, died in Brattleboro, Vt., Oct. 18, 1935. Born at West Brattleboro, Vt., Oct. 14, 1858, he received the A.B. degree from Williams College in 1881. After studying abroad at the universities of Leipzig and Geneva

during 1886-88, he returned to the United States for further study at Johns Hopkins University. He received the Ph.D. degree from the latter institution in 1892. During 1881-86 he was principal of the Deerfield (Mass.) Academy. He answered a call from the University of South Dakota in 1888 to be professor of modern languages, and held the post until 1890 when he went to Earlham College, Indiana, as professor of German and French. In 1892 he joined the faculty of the University of Chicago, serving successively as assistant professor of German (1892-94); associate professor (1894-1900); professor of German literature (1900-06) and head of the department of Germanic languages and literatures (1906-23). In the latter year he retired as professor emeritus. During 1901-02, Professor Cutting was president of the central division of the Modern Language Association of America. His publications include: *Der Konjunktiv bei Hartmann von Aue* (1894); a critical edition of Lessing's *Minna von Barnhelm* (1899); *The Modern German Relatives Das and Was* (1904); *Robert Wesselhoef, Jena Burschenschaft, German Revolutionary, and American Citizen* (1911); *Gutzkow and Young Germany* (1913); *An American Estimate of the Salient Features of Modern German Life* (1914); *Über Die Schriften des Jenaer Burschenschafters und Amerikanischen Arztes Robert Wesselhoef* (1917); *Heinrich von Treitschke's Treatment of Turner and Burschenschaft in His Deutsche Geschichte im Neunzehnten Jahrhundert* (1922).

CUVILLIER, LOUIS ANDREW. American public official, died in New York City, May 18, 1935. Born in Fairfax Co., Va., Feb. 4, 1871, he attended Georgetown University, Washington, D. C. He removed to New York where in 1907, he was elected to the New York Legislature. He served continuously until 1913, when he was defeated through his opposition to woman suffrage. However, he was again elected in 1919 and served up to the time of his death with the exception of a year's absence after his defeat in 1933. His knowledge of State government was reputed to have been greater than any other Democratic member in recent years. Cuvillier was ardently opposed to prohibition, and introduced bills to make the sale of beer and light wines legal in the State. He was a member of the Hofstadter Committee which investigated the affairs of New York City in 1932, and in 1935, he served on the Ways and Means Committee, the Public Relief and Welfare Committee, Judiciary Committee, and the Committee on the Affairs of the City of New York. His military activities consisted of service with the 71st Regiment of the New York National Guard in the Spanish-American War, and with the United States Army in the World War.

DALZIEL, JAMES HENRY DALZIEL, FIRST BARON. English publisher, died near Brighton, July 15, 1935. Born Apr. 24, 1868, he was educated at King's College, London. Beginning his journalistic career at the age of 16, he became London correspondent for the *Glasgow Times* in 1889. Three years later he was offered the candidacy for Kirkcaldy Burghs, which he accepted, and on his election as Liberal member, represented that constituency up to 1921. During the World War he was chairman of a committee that had charge of German prisoners of war. In the meantime (1917), he had acquired the *Pall Mall Gazette*, reputedly as an organ for Lloyd George, and after the War, inaugurated the *Sunday Evening Telegram*. As well as publishing the *Era* and the *Country World*, he was chairman and managing director of United Newspapers, Ltd. Knighted in 1908, he became a member of the Privy Council in 1912, and was raised to the barony in 1921. Lord Dalziel retired from active participation in journalism in December, 1922. He was a life governor of St. Georges Hospital and London Hospital.

DAMASCHKE, ADOLF WILHELM FERDINAND. German economist, died July 31, 1935, in Berlin, where he was born, Nov. 24, 1865. He received his education at the Teachers' Training School in Berlin, and became a teacher in public schools. His interest in social reform soon led him to give up his profession to devote his time to social problems. In 1892 he became editor of *Frei-Land* and in 1896, of the *Bodenreform*. In 1904 he served in the same capacity with the *Jahrbuch der Bodenreform*. A member of the Berlin seminary for public school teachers, he was appointed permanent counselor of the section dealing with home-lands in the Reich Ministry for public works. He was elected president of the league of German land owner reformers, which organization was built on his ideas to create new homes for the lower classes. In 1931 he was named Germany's candidate for the Nobel Peace Prize. With Naumann he helped found the National Socialist League for Land Reform. His publications include: *Die Bodenreform* (1923); *Ein Besuch in Bulgarien* (1923); *Zeitenwende* (1925); *Bibel und Bodenreform* (1929); *Geschichte der Nationalökonomie* (1929); *Völkische Redekunst* (1930); *Die Arbeitslosigkeit und ihre Überwindung* (1931), and *Bodenreform und Landwirtschaft* (1933).

DANA, CHARLES LOOMIS. American neurologist, died at Harmon-on-Hudson, N. Y., Dec. 12, 1935. Born at Woodstock, Vt., Mar. 25, 1852, he received the M.D. degree from Columbia University in 1877. For eight years after 1880, he was professor of physiology at the New York

Woman's Medical College. Also, in 1884, he occupied the chair of nervous diseases at the Medical School of Dartmouth College. After serving as professor of nervous and mental diseases during 1886-98 at the New York Post Graduate Medical School, he became, in 1902, on the formation of the Medical College of Cornell University, professor of nervous diseases. He retired from the chair in 1933. A visiting physician to Bellevue Hospital, he held the office of president in the American Academy of Medicine, the New York Academy of Medicine, and the New York Psychiatry Society. Dr. Dana, who was called the dean of American neurologists, was principally interested in public health, neurology, psychiatry, physiology, psychology, archaeology, the application of pathology to neuropathology, pathology of paralysis agitans, of combined sclerosis and of douloureux, cerebral localization of cutaneous sensations, alcoholism, and alcoholic meningitis. He wrote *Textbook of Nervous Diseases* (1892, 7th ed. 1908, 10th ed., 1929); *Peaks of Medical History* (1926), and was editor of the *Journal of Comparative Medicine* and associate editor of the *Medical Record*.

DANA, EDWARD SALISBURY, died June 16, 1935.

DANIELS, FRANK. American actor, died at West Palm Beach, Fla., Jan. 12, 1935. Born in Dayton, Ohio, in 1860, he received his education in the public schools of Boston. His first appearance on the stage was as the Sheriff in *Chimes of Normandy* at Chelsea, Mass., in 1879. After appearing at the Gayety Theatre in Boston, he went on tour for three years with the play, *An Electric Doll*, which was first produced in Manchester, England, in 1883 as *The Electric Spark*. Daniels made his first appearance on the English stage in the latter. Returning to New York the following year, he played the part of the Old Sport in *A Rag Baby*, with which he also toured for three years. In the latter rôle he established himself as an outstanding figure in comic opera. In 1887 he played the part of Packingham Giltedge in *Little Puck*, a play in which he appeared almost continuously for seven years. After appearing in *The Wizard of the Nile* at the Casino Theatre, New York in 1895, he played in *The Idol's Eye*, *The Amerc*, *Miss Simplicity*, *The Office Boy*, *Sergeant Brue*, *The Tattooed Man* and many other successful productions. His final appearance on the stage was in the rôle of Edward Pilfer in *Without the Law* in 1912 after which he retired from the theatre.

DAVID, FERNAND. French statesman, died in Paris, Jan. 17, 1935. He was born at Annemasse, Haute-Savoie, Oct. 18, 1869. Entering politics he was elected a deputy in 1898, becoming, in 1902, secretary of the Chamber of Deputies. He held this post for three years. In 1920 he became senator for Haute-Savoie. A member of the Left-Democratic group, he was Minister of Commerce in the Poincaré cabinet, 1912, Minister of Public Works in the Doumergue cabinet, 1913-14, and held the portfolio of Agriculture through the ministries of Briand, 1913; Viviani, 1914-15; Ribot, 1917; Painlevé, 1917, and Tardieu, 1930. In 1925 he was appointed General Commissioner of the International Exhibition of Decorative Arts. M. David was president of the National Office of Tourism; and of the Société Nationale d'Horticulture de France and Société Scientifique d'Hygiène Alimentaire, and was a member of the Académie d'Agriculture, and an advocate at the Paris Court of Appeals.

DAVIES, SIR WILLIAM. Welsh editor, died at Cardiff, Wales, Mar. 17, 1935. Born at Talley, Carmarthenshire, Wales, Oct. 7, 1863, he began his career as a journalist on the *Llanelli Guardian*. After serving as a reporter on the *Western Mail* in 1888, he became successively, editor of the *Evening Express*, and assistant editor and acting editor of the *Western Mail*. In 1901 he became editor-in-chief of that paper and held the post until his retirement in 1931. Also, during 1901-31, he edited the *Evening Express* and the *Weekly Mail*. A Fellow of the Institute of Journalists and former chairman of its South Wales Branch, Sir William was president of the Cardiff Cymrodorion Society (1919-20) and vice president of the World's Press Parliament which was held in St. Louis in 1904. Also, he served as one of the two vice presidents for Great Britain at the Press Congress of the World. In the World War he was a member of the Welsh Army Corps Committee. Governor of the University College of South Wales and Monmouthshire, he was also Justice of the Peace for Cardiff. He was knighted in 1921.

DAVIS, KATHARINE BEMENT, died Dec. 10, 1935.

DAY, CLARENCE. American author, died Dec. 28, 1935, in New York City where he was born in 1874. He received the A.B. degree from Yale University in 1896 and embarked on a financial career. He retired from that field to join the Navy, but, on being stricken with arthritis and facing a life of incapacity, he began to write. He was connected with the book department of the Metropolitan Magazine for a time, and his first literary effort was a series of magazine articles assembled into book form under the title *This Simian World* which was published in 1920. Then followed *The Crow's Nest* (1921); *Thoughts Without Words* (1928); *God and My Father* (1932); *In the Green Mountain Country* (1934), and in the summer of 1935, *Life With Father*, which proved to be his best seller. In less than six months, more than 114,000 copies of the work were sold.

DAY, HOLMAN FRANCIS. American author, died at Mill Valley, Calif., Feb. 19, 1935. Born at Vassalboro, Me., Nov. 6, 1865, he received the A.B. degree from Colby College in 1887. Two years after his graduation he became associated with the Union Publishing Company of Bangor, Me., as managing editor of their publications. Subsequently he entered the journalistic field, and was editor and proprietor of the *Dexter (Me.) Gazette*, later becoming a special writer for the *Lewiston (Me.) Journal*. Also, he served as Maine representative for the *Boston Herald*, and as managing editor of the *Lewiston Daily Sun*. From 1901 to 1904 he served on the staff of Gov. John F. Hill of Maine as military secretary with the rank of major. His writings include: *Up in Maine* (verse, 1900); *Pine Tree Ballads* (1902); *Kin O'Kandn* (1904); *Squire Phin* (1905, a novel which was later dramatized as *The Circus Man* and produced in Chicago in 1909); *Rainy Day Railroad War* (1906, 1913); *The Eagle Badge* (1908); *King Spruce* (1908); *The Ramrodders* (1910); *The Skipper and the Skipped* (1911); *The Red Lane A Romance of the Border* (1912); *The Landloper* (1915); *Along Came Ruth* (a play produced in New York in 1914); *Blow the Man Down* (1916); *Where Your Treasure Is* (1917); *Kavanaugh's Larc* (1917); *The Rider of the King Log* (1919); *When Egypt Went Broke* (1920); *All Wool Morrison* (1921); *Joan of Arc of the North Woods* (1922); *The Loving Are the Daring* (1923); *Leadbetter's Luck* (1923); *Clothes Make the Pirate* (1925); *John Lang* (1926); *When the Fight Begins* (1926); *Starwagons* (1928), and *Ships of Joy* (1932). Also he wrote motion picture scenarios.

DE KAY, CHARLES, died May 23, 1935.

DELANAY, SEIDEN PEABODY. American Roman Catholic clergyman, died in New York City, July 5, 1935. Born in Fond du Lac, Wis., June 24, 1874, he received the A.B. degree from Harvard University in 1896, and then studied at the Western Theological Seminary in Chicago. Ordained a priest of the Protestant Episcopal Church in 1899, his first post was that of curate in St. Paul's Cathedral in Fond du Lac. His next charge was at St. John's Church, Roxbury, Mass., and in 1900 he was appointed vicar of St. Stephen's Church in Menasha, Wis. After serving as rector of Grace Church, Appleton, Wis., during 1902-07, he became dean of All Saints Cathedral in Milwaukee. In 1915 he was transferred to New York as associate rector of the Church of Saint Mary the Virgin. He remained there until 1930, having, in the meantime (1929), become rector. In June, 1930, he entered the Roman Catholic Church and in September of the same year began study at Beda College in Rome. Ordained a priest of the Roman Catholic Church in Rome in 1934, he was made temporary chaplain at the Convent of the Religious of Jesus and Mary at Highland Mills, N. Y. He held the post up to February, 1935, when he retired because of illness. Father Delaney's publications include *Difficulties of Faith* (1906), *The Ideal of Christian Worship* (1909), *The Value of Confession* (1913), *The Religion of the Prayer Book* (1919), *Christian Practice* (1920); *The Parish Priest* (1926), and *Why Rome* (1930). Also, he translated Louis De Launay's *A Modern Pica for Christianity* in 1927.

DELFENBAUGH, FREDERICK SAMUEL, died Jan. 29, 1935.

DERBY, BISHOP OF (RT. REV. EDMUND COURTENAY PIARCE). English prelate, died at Derby, Oct. 13, 1935. Born in London, Dec. 17, 1870, he attended Christ's Hospital (Blue Coat School) in London where he won a scholarship to Corpus Christi College, Cambridge. He received the M.A. degree from the latter in 1896. Ordained to the Anglican Church, he became in 1899 assistant curate at St. James' Church in Muswell Hill, and from 1900 to 1906 was vicar of St. Benedict's, Cambridge. Also, during 1900-10, he held a classical lectureship at the University of Cambridge. Becoming dean of Corpus Christi College in 1901, he served in that capacity until 1914 when he became Master of the College. During his incumbency of the latter post (1914-27), he served also as vice chancellor of the University (1921-24). In 1927 he was elevated to the bishopric as Bishop of Derby. Active in the municipal affairs of Cambridge during his long term of residence there, he served successively as town councillor (1915); mayor (1917); county councillor (1919); county alderman (1923), chairman of the Cambridgeshire County Council (1927), and Cathedrals Commissioner (1931). Also, Bishop Derby was examining chaplain to the Bishop of Worcester and assistant secretary for examinations to the local Examinations and Lectures Syndicates (1910-14).

DESERVIERE, PABLO. Cuban statesman, died Dec. 20, 1935, in Havana, where he was born in 1854. After attending Columbia University in New York, he returned to Cuba to practice law. Appointed American Military Governor in 1899, he became, the next year, professor of civil law at the University of Havana. In 1911 he was president of the Exposition of Agriculture, Industry, Art, and Labor, and in 1913 he became a member of the diplomatic corps. Following his appointment as Envoy Extraordinary and Minister Plenipotentiary to Washington, he returned to Cuba and became Secretary of State in 1914. He served in that capacity until 1919. His last post was that of president of the Council of State, to which he was appointed by President Mendieta in November, 1935.

DEUTSCH, BERNARD S. American public official, died in New York City, Nov. 21, 1935. Born in Baltimore, Md., Sept. 25, 1884, he received the LL.B. degree from the New York Law School in 1904. From his admittance to the New York bar the following year, he continued to practice in the New York courts. His activity in the bar associations of the city brought him to the attention of Gov. Alfred E. Smith who appointed him to the New York State Municipal Court Commission in 1923. With Charles Evans Hughes, Henry W. Taft, and Samuel Seabury, he served on the ambulance-chasing investigation instigated by the Appellate Division of the Supreme Court in 1930. This led to the disbarment of several lawyers. In recognition of his services to the law, Mr. Deutsch was chosen in 1932 an independent candidate for Justice of the Supreme Court by all the bar associations in New York City. Although defeated he received 300,000 votes. In 1933 he was selected as candidate for President of the Board of Aldermen, with Fiorello H. LaGuardia for mayor on the Fusion ticket. Deutsch took office in January, 1934, and during his incumbency headed investigations of municipal affairs, sought a reform of the city school system, and served as mediator in many labor disputes. A leader in Jewish affairs, he attended the World Jewish Conference in Geneva, and helped form committees to investigate oppression of Jews in Russia and Germany. During 1927-30 he was president of the Bronx County Bar Association and served as chairman of its board of directors. A member of the executive committee of the New York State Bar Association, he was treasurer of the New York Conference on Legal Education and a member of the International Congress of Comparative Law and the American Association of International Law.

DE VRIES, HUGO, died May 21, 1935.

D'HESTROY, BARON EDMOND DE GAIFFIER. Belgian diplomat, died in Paris, France, July 20, 1935. Born May 30, 1866, he began his diplomatic career with a minor secretaryship and continued to be assigned to increasingly important posts, until 1904 when he was appointed Minister to Peking (Peiping). Eight years later he was recalled to Belgium to become a member of the Ministry of Foreign Affairs, in the capacity of Director of Political Affairs. As such, he informed Germany that his country would not allow the German armies to pass through Belgian territory en route to France. Appointed to the Belgian Legation in Paris in 1917, he was named Ambassador two years later when the legation became an embassy. He was called the dean of the foreign diplomatic corps in Paris, and figured prominently in all Belgian political affairs in the French capital after the World War. His last activity, in July, concerned Belgian recognition of Soviet Russia. Baron D'Hestroy was the recipient of the Grand Cross of the Legion of Honor.

DIELMAN, FREDERICK, died Aug. 15, 1935.

DINGWALL, ADAM. American publisher, died in New York City, Aug. 5, 1935. Born in Aberdeen, Scotland, in 1861, he migrated to the United States as a youth, settled in Kansas City, then moved to Chicago, and finally came to New York about 1910, when he became connected with the D. Appleton Company, and later with the Funk and Wagnalls Company. He was an able subscription book salesman, and for several years served as manager, secretary, and treasurer of the Current Literature Publishing Company Associated with William Wise and Company, he was general manager of *Current Opinion*, but in 1924 he founded the firm of Dingwall-Rock, Ltd., importers and publishers of the classics. He came into prominence in 1927 when he imported the Madrus-Mather version of *The Arabian Nights* which was subjected to censorship.

DINWIDDIE, ALBERT BLEDSOE. American educator, died in New Orleans, La., Nov. 21, 1935. Born in Lexington, Ky., Apr. 3, 1871, he received the Ph.D. degree from the University of Virginia in 1892, and during 1902-03 attended the University of Göttingen. He began his teaching career at the University of Virginia where, during 1888-91, he was an instructor. In 1891 he became principal of Greenwood (Va.) Academy, remaining there until 1893. Two years later he became first assistant at University School, Richmond, Va., and in 1896 was called to Southwestern Presbyterian University as professor of mathematics. He held the latter chair until 1906 when he began his long association with Tulane University. He served successively as assistant professor of applied mathematics and astronomy (1906-08), associate professor (1908-10), and full professor from 1910. During the World War he was director of war training at the University, and from 1910 to 1918 was dean of the College of Arts and Sciences. He relinquished this post in 1918 to become president of Tulane. During his term of office, a programme of expansion was formulated, and in 1920 he was successful in raising \$2,750,000 for the endowment fund.

DINWIDDIE, EDWIN COURTLAND, died May 5, 1935.

DIXEY, FREDERICK AUGUSTUS. English entomologist, died Jan. 16, 1935 in London, where he was born, Dec. 9, 1885. He received his education at Wadham College, Oxford, and at University College, London. In 1880 he became demonstrator of physiology at University College and served there until 1883. In the same year he went over to Oxford University where he remained until 1891. A former

curator of the Hope Collections at Oxford and former president of the Entomological Society of London and the Zoological Section of the British Association, he was also vice chairman of the Association of British Zoologists. Dr. Dixey's principal interest was the study of butterflies. Besides contributing to the journals of the Royal, Entomological, and Zoological Societies, he wrote *Necessity of Pain* (1888) and *Epidemic Influenza* (1892).

DODGE, WILLIAM DE LEFTWICHT. American painter, died in New York City, Mar. 25, 1935. Born at Liberty, Va., Mar. 9, 1867, he studied in Paris and Munich and entered first place in the examination for the Ecole des Beaux Arts. A former professor at Cooper Union and the Art Students League, Mr. Dodge was chief of color at the Sesquicentennial Exposition in Philadelphia in 1926. His principal works include decorations of the Café de l'Opéra, Paris, the Folies Bergères Theatre, murals for the Panama-Pacific International Exposition, and for the Flag Room of the capitol at Albany, N. Y., mosaics for the Hall of Records, New York, "Signing of the Peace" at Versailles, and "Taking of Fort de Vaux." Also, he did the Dome of the Administration Building at the Chicago Exposition, decorated the Empire Theatre in New York, the Waldorf-Astoria Hotel, the Academy of Music, Brooklyn, N. Y., and a panel for the Orlando (Fla.) County Court Mr. Dodge won many art awards, among which were: the Prix d'Atelier in Concours d'Atelier Gérôme, gold medal from Prize Fund Exhibition, 1887; medal at the Paris Salon, 1888, medal at the Chicago Exposition, 1893.

DOHENY, EDWARD LAURENCE, died Sept. 8, 1935

DOLE, NATHAN HASKELL, died May 9, 1935

DOMINIAN, LEON. American diplomat, died in Montevideo, Uruguay, S. A., July 25, 1935. Born in Constantinople, Turkey, Apr. 13, 1880, he received the B.A. degree from Robert College in Constantinople in 1898 and the following two years took special courses in geography and geology at the University of Liège, Belgium. After traveling in Turkey, he became field assistant to the U.S. Geological Survey in 1903 and the following year, instructor at the New Mexico School of Mines. During 1905-07 he was engaged in exploration and travel in the Southwest and Mexico and from 1907 to 1912 devoted his time to writing and research in New York City. He began association with the American Geographical Society in 1912 as geographer and editorial writer. In 1918 he conducted special investigations on boundary problems for the Department of State and for the next two years was active in the Honduras-Guatemala boundary mediation. In February, 1919, he was assigned to the American Peace Commission in Paris, France, and in August of the same year was appointed a special assistant in the Department of State. He was appointed lecturer in Georgetown University's School of Foreign Service in 1921, and six months later was named consul at Rome. In the latter capacity he was detailed for economic duty in Italy. Six years after his appointment as foreign service officer, class four, in July, 1924, he became consul general at Stuttgart, Germany. In 1934 he was transferred to Montevideo as first secretary to the United States Legation there. A delegate to many geological and scientific congresses, he held membership in the Association of American Geographers, American Oriental Society, and the American Association of Political and Social Science. Dominian, who became a naturalized citizen of the United States in 1913, was the author of *The Frontiers of Language and Nationality in Europe* (1917).

DONNELLY, FREDERICK WILLIAM. American public official, died at Summit, N. J., Sept. 25, 1935. Born in Trenton, N. J., Oct. 14, 1866, he received his education at the New Jersey State Model School in Trenton, and at the Episcopal College in Burlington, N. J. He began his career as a traveling salesman at the age of 17 and served during 1892-1907 as manager of his father's store in Trenton. From the latter date he was president of the Frederick W. Donnelly Company. Meanwhile, he entered politics and in 1909 was appointed to the Trenton Harbor Board. In 1911 he was elected first mayor of Trenton under the commission form of government. Reelected to serve throughout 1935, he resigned his office in 1932 after 21 years of service. A former chairman of the Sinking Fund Commission, he was Democratic candidate for the United States Senate from New Jersey in 1924. Mr. Donnelly held the office of president in the New Jersey Ship Canal Commission, New Jersey Rivers and Harbors Congress, the Trenton-Philadelphia-New York Waterways Association, the Mercer County Tuberculosis and Health League, and the League of New Jersey Municipalities.

DORSET, MARION. American chemist, died in Washington, D. C., July 14, 1935. Born at Columbia, Tenn., Dec. 14, 1872, he received the B.S. degree from the University of Tennessee in 1893 and the M.D. degree from Columbian (now George Washington) University in 1896. He began his association with the U.S. Department of Agriculture in 1894 as an assistant in the biochemical division, becoming, in 1901, assistant chief, and in 1904, chief of the division. During 1897-98 he was a demonstrator in bacteriology and pathology at George Washington University. Dr. Dorset was a co-discoverer of hog cholera serum and his work dealt principally with the etiology and prevention of hog cholera, chemistry, and biology of *Bacillus tuberculosis*, and

the chemistry and bacteriology of meats. A fellow of the American Association for the Advancement of Science, he was a member of the American Public Health Association, Society of American Bacteriologists, American Chemical Society, and the Czechoslovakian Academy of Agriculture.

DOUGLASS, LUCILLE SINCLAIR. American painter, died at Andover, Mass., Sept. 26, 1935. Born at Tuskegee, Ala., she received the A.B. degree from the Woman's College, Tuskegee, Ala., and during 1909-14 studied with Lucien Simon and René Menard in Paris. She then accompanied Alexander Robinson on field trips in Europe and North Africa. In 1921 she became a member of the editorial staff of the Shanghai (China) *Sunday Times*, where she remained until 1924. From the latter date she devoted her time to out-door painting and etching, specializing in scenes of the Far East. She made etchings of the ruins of temples at Angkor in the jungles of Cambodia at the request of the French Colonial Government for their exhibition in 1927. Also, from 1921 she lectured on the Far East and from 1925 to 1932 was active illustrating books on China and Angkor written by Florence Ayscough and Helen Churchill Candor. Her work is exhibited in the Metropolitan Museum and the Public Library in New York City, the Library of Congress and the Corcoran Art Gallery in Washington, D. C., the Rhode Island School of Design in Providence, the Museum of Fine Arts in Minneapolis, the Addison Gallery of Art at Andover, Mass., the Canadian National Academy in Montreal, the British Museum in London, the Musée Guimet in Paris, L'Ecole Française d'Extrême Orient at Hanoi, and in private collections in America, Europe, and China.

DRIFYUS, ALFRED, died July 12, 1935.

DUNAN, WILLIAM, died Mar. 7, 1935.

DUDLEY, HAROLD WARD. English biochemist, died Oct. 3, 1935. Born in Derby, Oct. 30, 1887, he attended Truro College and received the M.Sc. degree from the University of Leeds in 1910 and the Ph.D. degree from the University of Berlin two years later. In 1912 he came to New York as an assistant at the Herter Laboratory where he came under the influence of H. D. Dakin. The collaboration of these two men led to the discovery of the enzyme glyoxalase. He returned to England in 1914 and became lecturer in biochemistry at the University of Leeds. In the World War he served during 1915-18 as a lieutenant-major with the Royal Engineers. From 1919 he was biochemist at the Medical Research Council's Laboratories at Hampstead. Also, from 1924 to 1930, he was joint editor of the *Biochemical Journal*. Dudley was made an officer of the Order of the British Empire in 1919 and elected a fellow of the Royal Society in 1930.

DUFF GORDON, LUCY, LADY. English stylist in women's wear, died in London, Apr. 21, 1935. She was born in Canada in 1864, a sister of Elinor Glyn, the novelist. In 1893 she entered the dressmaking business in London and the following year adopted the trade name of Lucile. In March, 1900, she married Sir Cosmos Edmund Duff Gordon, and three years later sold her business to Lucile, Ltd. Through this transaction she acquired a large number of shares and in 1910 opened a shop in New York City. Of this she held the title of president. A great success at first, the establishment was raided the following year by customs officials who charged conspiracy to defraud the United States Government of customs duties. The New York firm went into bankruptcy in 1922 and two years later, the London firm failed. Lady Duff Gordon was regarded as one of the world's outstanding dress designers, but was an extremely poor business woman. She brought freedom and grace back to woman's clothing after the Victorian era, and was reputed to have effected such styles as the split skirt, and to make use of mannequins in fashion shows. She and her husband were among those rescued from the ill-fated White Star Liner *Titanic* in 1912. Lady Duff Gordon published her reminiscences in 1932 under the title *Discretions and Indiscretions*.

DUISBERG, CARL, died Mar. 19, 1935.

DUKAS, PAUL, died May 17, 1935.

DUNDONALD, DOUGLAS MACKINNON BAILLIE HAMILTON COCHRANE, TWILFTH EARL OF. Scottish soldier, died at Wimbledon, Apr. 12, 1935. Born Oct. 29, 1852, he received his education at Eton. In 1870 he entered the Second Life Guards and from 1884 to 1885, when he succeeded to the title on the death of his father, he was a member of the Nile Expedition and participated in Stewart's march across the desert for relief at Khartoum. He was present at the battles of Abu Klea and Goubat and commanded a transport of desert troops on the march to Metemeh. From 1895 to 1899 he commanded the Second Life Guards with the rank of colonel. After commanding the mounted troops of the South Natal Field Force at Colenso in the Boer War in 1899, he was active in the fighting at Tugela River with the second cavalry brigade and with them entered Ladysmith in February, 1900. In the same year he was promoted to the rank of major general for distinguished service. After commanding the Canadian Militia during 1902-04, he returned to England. Shortly after his promotion to the rank of lieutenant general in 1907, he retired. During the World War he served as chairman of the Admiralty Committee on Smoke Screens. In South Africa he formed the

first mobile machine-gun company used in that war. A special ambassador to the Peruvian Centenary in 1921, he published his memoirs in 1926 under the title, *My Army Life*.

DU PONT, ALFRED IRANKÉ. American financier, died in Jacksonville, Fla., Apr. 29, 1935. Born in Wilmington, Del., in 1865, he received his education at the Massachusetts Institute of Technology. With his cousins, he took over the E. I. du Pont de Nemours powder company in 1902 and immediately began to reorganize it. By the end of 10 years, during which time he served as vice president and general manager, the company's assets had grown from \$15,000,000 to \$82,000,000. Also, during his term of office, prismatic powder for use with large-calibre artillery was developed and the machine that made black powder was designed. Although he retired from active participation in the direction of the company in 1916, he continued to be the largest individual stockholder in the company. In the hope that international commerce might advance through trade exhibitions, he purchased the Grand Central Palace in New York City for exhibition purposes in 1918. Eight years later he removed to Florida and bought up enough land to become known as one of the largest land owners in Florida. Also, he became chairman of the Board of Directors of the Florida National Bank in Jacksonville. A keen advocate of the establishment of old-age pensions, he set up a system by which 1000 persons in Delaware received monthly pensions through his generosity, when such a bill failed to be passed in the Delaware Legislature in 1929. His philanthropies included the development of radium, at great expense, for use in the treatment of cancer.

EDISON, THOMAS ALVA, JR. American engineer, son of the distinguished American inventor, Thomas A. Edison, died in Springfield, Mass., Aug. 25, 1935. Born at Menlo Park, N. J., in 1876, he attended St. Paul's School in Concord, N. H., and then engaged in experimental work at his own laboratory in Burlington, N. J. His specialty was the improvement of internal combustion engines and he obtained patents for various devices he had perfected toward the improvement of this type engine. In 1918 he joined his father's company at Orange, N. J., and later became head of the research engineering department, a post he was holding at the time of his death.

EPSON, JOHN JOY. American banker and civic leader, died in Washington, D. C., July 15, 1935. Born at Jefferson, Ohio, May 17, 1846, he received the LL.B. degree from Columbian (now George Washington) University in 1868 and was admitted to the bar the following year. From 1863 to 1875 he was a clerk in the Treasury Department, and for the next six years was a patent attorney. He organized the Equitable Building Association in 1879, serving from that date to 1898 as secretary, and from 1898 up to the time of his death as president. Treasurer of the executive committee of the American Red Cross during the Spanish-American War, he was elected president of the Washington Loan and Trust Company in 1894 and during his term of office (1894-1917), the bank became known as one of the foremost institutions of its kind in the country. In 1900 he began his long association with the National Geographic Society, serving as treasurer since that date, and also, as a trustee. Mr. Edison held the office of president of the National Homoeopathic Hospital (1889-95), Civil Service Reform Association of the District of Columbia (1895-1907), and of the Washington Board of Trade (1900-01). He was chairman of the Board of Public Welfare for Washington during 1897-1929, and held the same post on the Capital Issue Committee of the District of Columbia during the World War.

EIDLITZ, ROBERT JAMES. American contractor, died May 17, 1935, in New York City where he was born, Mar. 25, 1864. On his graduation from Cornell University in 1885, he went to Berlin to study architecture. On the death of his brother in 1928 he became head of the building firm of Marc Eidlitz and Son, Inc. Among the more important buildings which this firm erected were the New York Stock Exchange, New York Clearing House, Western Union Building, Rockefeller Institute, American Telephone and Telegraph Building, the Harkness Memorial at Yale University, the Presbyterian Medical Centre, and the library of Columbia University. Keenly interested in numismatics, Eidlitz was awarded the American Numismatic Society's Huntington Medal in January, 1928, for his works, *Medals and Medallions Relating to Architects* (1927), and *Medallion Portraits of James Watts and Matthew Boulton* (1928).

EISEBERG, HARRY BELLEVILLE. American surgeon, died in New York City, Aug. 10, 1935. Born at Hoboken, N. J., Jan. 15, 1892, he received the M.D. degree from New York University and Bellevue Hospital Medical College in 1913. An instructor in anatomy at that institution from 1915 to 1918, he served during the next five years as surgeon there. From 1923 he was lecturer and assistant in charge of the department of experimental surgery. At the time of his death he was a member of the medical board of Harlem Hospital and consulting surgeon to Riverside, Lutheran, and Roosevelt Hospitals, the United States Marine Hospital on Ellis Island, and the North Hudson Hospital at Weehawken, N. J. Dr. Eisberg was an authority on intestinal obstruction and abdominal wounds and injury. A fellow of the American College of Surgeons and the New

York Academy of Medicine, he was a member of the American Medical Association and the Society of Experimental Biology.

ELLIOTT, CHARLES BURKE. American jurist, died in Minneapolis, Minn., Sept. 18, 1935. Born in Morgan County, Ohio, Jan. 6, 1861, he received the LL.B. degree from the State University of Iowa in 1881, and the Ph.D. degree from the University of Minnesota in 1888. After serving as legal writer for several publications in St. Louis during 1882-83, he removed to Minneapolis where he practiced law. In 1890 he was appointed judge of the Municipal Court, and three years later he sat on the bench of the District Court, Fourth District. After serving as associate justice of the Supreme Court of Minnesota from 1904 to 1909, he went to the Philippine Islands in the latter year to serve in the same capacity. From 1910 to 1912 he was a member of the Philippine Commission, also serving as secretary of the Department of Commerce and Police. Also, during 1890-99 he occupied the chair of corporation and international law at the University of Minnesota, and during 1911-12, was professorial-lecturer on constitutional law at the University of the Philippines. President of the Philippine Carnival Association in 1910 and of the Philippine Industrial Exposition in 1911, he held the same office in the American branch of the International Law Association. His publications include: *The United States and the North-eastern Fisheries* (1887); *The Law of Public Corporations* (1898, 2d ed., 1910); *The Law of Private Corporations* (1900, 5th ed., 1923); *Minnesota Practice* (1900, new ed., 2 vols., 1923); *The Law of Insurance* (1902); *The Philippines* (2 vols., 1917).

ELSENHEIMER, NICHOLAS J. German-American composer, died at Limburg, Germany, July 12, 1935. Born at Wiesbaden, Germany, June 17, 1866, he attended Heidelberg University, studying music with his father, and theory with G. Jakobsthal in Strassburg. He came to the United States in 1890 when he joined the Cincinnati College of Music as professor of piano, theory, and musical literature. He served in this capacity up to 1906. He came to New York City the following year, where, from that date, he was dean of the Granberry Piano School and choirmaster of St. Ignatius Church. His compositions include: *Die Weshe der Kunste* (a cantata for mixed voices and orchestra which was awarded the North American Sangerbund prize in 1899); *The Angels' Lullaby* (for vocal quartet, string quartet, and orchestra); *Belshazzar* (a dramatic ballad for tenor or soprano); *Humoresque* (for string orchestra), and *Eventide* (a chorus for female voices with string accompaniment).

EMERTON, EPHRAIM. American historian, died at Cambridge, Mass., Mar. 3, 1935. Born in Salem, Mass., Feb. 18, 1851, he received the A.B. degree from Harvard University in 1871, and the Ph.D. degree from the University of Leipzig in 1876. On his return to the United States in the same year, he became instructor in history and German at Harvard University and from 1878 to 1882 was instructor in history. In the latter year he took up the Winn professorship of ecclesiastical history, and held the chair until his retirement in 1918 as professor emeritus. With Dieterweg, H. B. Adams, and others, he wrote *Methods of Teaching History* (1883). His works dealing with the Middle Ages and the Early Reformation include: *An Introduction to the Study of the Middle Ages, 375-814* (1888); *Medieval Europe, 814-1300* (1894); and "Desiderius Erasmus" in *The Heroes of the Reformation* (1899). His later works include: *Unitarian Thought* (1911); *Beginnings of Modern Europe* (1917); *The Defensor Pacis of Marsiglio of Padua* (1920); *Learning and Living* (essays, 1921); *Humanism and Tyranny—Studies in the Italian Trecento* (1925). He translated the correspondence of Pope Gregory VII in 1931, and that of St. Boniface, three years later. A fellow of the American Academy of Arts and Sciences, he was a former president of the American Society of Church History (1920-21); and the Cambridge Historical Society (1921-27). Also, he was a corresponding member of the Institut Genévois.

EWING, CHARLES H. American railroad official, died at Melrose Park, Pa., Dec. 8, 1935. Born in Chester County, Pa., May 28, 1866, he was privately tutored in civil engineering and began his career with the Philadelphia and Reading Railway in 1883 as assistant engineer and supervisor. In 1892 he went over to the Central New England Railway (later the New York, New Haven, and Hartford) as division engineer, later becoming chief engineer. On his return to the Philadelphia and Reading in 1902, he served as division engineer and engineer in charge of maintenance of way. After being superintendent of the Atlantic City Railroad during 1910-12, he returned to the Philadelphia and Reading in 1913 as general superintendent. Three years later he became general manager, and the following year, 1917, vice president. When the Federal government took over control of the railroads in 1918, he was named Federal manager of the Philadelphia and Reading and the Central Railroad of New Jersey. In 1920 he again became vice president of the Philadelphia and Reading Railway, and on its reorganization as the Reading Company in 1924, he retained the office. He was elected president of the latter company in April, 1932, and on the acquisition of the Central Rail-

road of New Jersey by the Reading Company, became its president in June, 1933.

EWING, SIR (JAMES) ALFRED, died Jan. 7, 1935.

FARQUHARSON, JOSEPH. Scottish painter, died at Finzean, Aberdeenshire, Scotland, Apr. 15, 1935. Born in Edinburgh, May 4, 1846, he came under the tutelage of Peter Graham, the Scottish landscape artist, and attended the Royal Scottish Academy. He exhibited regularly at the Royal Academy in London from 1873. In 1880 he began study with Carolus Duran in Paris and in 1887, the Fine Art Society of London displayed 70 of his paintings at their exhibition. Elected to the Royal Academy in 1915, he was one of the five senior academicians. Mr. Farquharson, who was regarded as one of the greatest of modern landscape painters, is represented in the Tate Gallery, the art galleries of Manchester, Liverpool, Leeds, and other English cities, and in the Royal Institute of Painters in Oil. His "Joyless Winter's Day" (now in the Tate Gallery), was the most popular of his paintings.

FAWCETT, THE RT. REV. M. EDWARD. American bishop, died in Quincy, Ill., Sept. 18, 1935. Born at New Hartford, Iowa, Nov. 1, 1865, he received the A.B. degree from Upper Iowa University in 1886 and the Ph.D. degree from that institution in 1893. He then studied divinity at the Garrett Biblical Institute and entered the ministry of the Methodist Church. During 1894-96 he was pastor of the Grace Methodist Church in Quincy, Ill. In the latter year he resigned his pastorate to enter the Protestant Episcopal Church. He became deacon and priest in 1897 and took charge of the Church of the Redeemer in Elgin, Ill. From 1901 to 1904 he was rector of St. Bartholomew's Church in Chicago. He was consecrated third Bishop of Quincy in January, 1904, having been elected to the post in May, 1903. From 1917 he was chaplain of the Fifth Illinois Infantry with the rank of captain, and divisional chaplain of the 33d division of the United States Army. In 1919 he was president of the Quincy Chamber of Commerce and vice president of the Illinois State Chamber of Commerce.

FISHER, WALTER LOWRIE. American lawyer, died at Hubbard Woods, Ill., Nov. 9, 1935. Born in Wheeling, Va. (now W. Va.), July 4, 1862, he was graduated from Hanover College, Indiana, in 1883. On his admittance to the bar five years later, he practiced law until 1911 and after 1913 in Chicago. He was a member of the law firm of Fisher, Boyden, Bell, Boyd, and Marshall. During 1888-89 he was special assessment attorney for Chicago, and during 1906-11 and from 1914, special traction counsel. In 1911 he was appointed Minister of the Interior in President Taft's cabinet, and served in that capacity until 1913 when he returned to private practice. Mr. Fisher held the office of president in the Municipal Voters' League (1906), Conservation League of America (1908-09), and that of vice president in the National Conservation Association (1910-11), and the National Municipal League. His publications include: *Address on Alaskan Problems* (1911) and *Alaskan Coal Problems* (1912).

FITZMAURICE, EDMOND GEORGE FITZMAURICE, FIRST BARON, OF LEIGH, died June 21, 1935.

FLETCHER, J. S. English novelist and historian, died at Dorking, Surrey, Jan. 30, 1935. Born at Halifax in Yorkshire in 1863, he received a private education. His journalistic career was begun with contributions on rural life to such newspapers as the *Leeds Mercury*, the *Star*, the *Morning Leader*, and the *Daily Mail*, under the pseudonym, *A Son of the Soil*. Subsequently he became a special correspondent for the *Leeds Mercury*, and in 1893 was made assistant leader-writer for that paper, serving until 1898. He covered the coronation ceremonies of Edward VII in 1902 for the *Yorkshire Post*. Always interested in the history of his country, his first book was a historical novel, *When Charles the First Was King*, issued in 1892. Then followed *The Wonderful Wapentake* (1894); *Where Highways Cross* (1895); *Mistress Spilfire* (1896); *Life in Arcadia* (1896); *God's Failures* (1897); *The Making of Matthias* (1897); *The Builders* (1897); *The Paths of the Prudent* (1899), and *From the Broad Acres* (1899). On his retirement from the journalistic field, he devoted himself exclusively to historical writings and fiction which include: *A Picturesque History of Yorkshire* (3 vols., 1899-1900); *The History of the St. Leger Stakes* (1902); *Lucian the Dreamer* (1903); *David March* (1904); *Grand Relations* (1904); *The Threshing-Floor* (1907); *Daniel Quayne* (1907); *A Book about Yorkshire* (1907); *Mothers in Israel* (1908); *The Enchanting North* (1908); *Memories of a Spectator* (1912); *The Town of Crooked Ways* (1912); *Perris of the Cherry Trees* (1913); *The Marriage Lines* (1914); *The Annexation Society* (1916); *The Making of Modern Yorkshire* (1918); *Memorials of a Yorkshire Parish* (1918); *The Cistercians in Yorkshire* (1919), and *The Reformation in Northern England* (1925). He published his first detective novel, *Scarhaven Keep*, in 1920. Then followed other detective novels, including *Exterior to the Evidence* (1920), *The Root of All Evil* (1921); *In the Mayor's Parlour* (1922); *The Burma Ruby* (1923); *The Kang-He Vase* (1924); *False Scent* (1924); *The Mill of Many Windows* (1925); *The Stolen Budget* (1926); *The Green Rope* (1927); *The Matheson Formula* (1930); *Murder at Wrides Park* (1931); *Murder in the Squire's Pew* (1932), and *The Ebony Box* (1934). In 1932 he issued *Collected Verse*.

FOERSTER, ELIZABETH NIETZSCHE. German author, sister of the philosopher, Friedrich Nietzsche, died in Weimar, Germany, Nov. 8, 1935. Born at Rocken, near Lutzen, Saxony, July 10, 1846, she was the constant companion of her brother up to 1885, the time of her marriage to Dr. Bernhard Foerster, scientist and traveler, and her subsequent removal to Paraguay. Dr. Foerster died on a South American expedition in 1889, and she returned to Germany to take care of Nietzsche who had suffered a complete breakdown in health. They settled in Weimar and here she served as his secretary and nurse up to the time of his death (1900). In 1896 she became head of the Nietzsche Archive in Weimar and it was largely due to her efforts that his works were compiled and presented to the world. Also, she published his personal letters and wrote the following books on his life: *The Life of Frederick Nietzsche* (3 vols., 1895, 1897, 1904); *The Nietzsche Archive, Its Friends and Its Foes* (1907); *The Young Nietzsche* (1912); *The Lonely Nietzsche* (1913); *Wagner and Nietzsche at the Time of Their Friendship* (1914), *The Elderly Nietzsche* (1924).

FOREMAN, MILTON J. American lawyer, died Oct. 16, 1935, in Chicago, Ill., where he was born, Jan. 26, 1863. Educated in the public schools there, he entered the employ of Keith Brothers and Company, wholesale hatters, at the age of 12, remaining there until 1898. Meanwhile, he attended the Chicago College of Law at night. Following his admittance to the Illinois bar the following year, he became a member of the Chicago city council, continuing as such until 1911. Also, he served the city in other capacities, including chairman of the Street Railway Commission (1900-02), of the Committee on Local Transportation (1907-11); of the Chicago Charter Convention (1905-06), and as member of the Illinois Liquor Control Commission from 1934. At the time of his death, he was a member of the law firm of Foreman, Bluford, Krimley and Schultz. With the Illinois National Guard, which he joined in 1895, he served in the Spanish-American War as captain in the First Illinois Cavalry, and from 1906 to 1917, as colonel with the same group. In the World War he was a member of the 122d Field Artillery of the American Expeditionary Force, and in 1920, became major general, commanding the 33d Division. The following year he was raised to brigadier general, and in 1931, retired with the rank of lieutenant general. His decorations included the Distinguished Service Cross, Distinguished Service Medal, Silver Star Decoration with two clusters, of the United States, and commanderates in the French Legion of Honor and the Belgian Order of the Crown. Mr. Foreman was a former national commander of the American Legion.

FOSTER, FRANK HUGG. American theologian, died at Oberlin, Ohio, Oct. 20, 1935. Born in Springfield, Mass., June 18, 1851, he received the A.B. degree from Harvard University in 1873, and served, during the following year, as assistant professor of mathematics at the United States Naval Academy. On his graduation from the Andover Theological Seminary in 1877, he was ordained to the ministry of the Congregational Church. From 1877 to 1879 he was pastor at North Reading, Mass., going abroad in the latter year to study. In 1882 he received the Ph.D. degree from the University of Leipzig. On his return to the United States in the same year, he became professor of philosophy at Middlebury College and in 1884 was invited to occupy the chair of church history at Oberlin Theological Seminary. Eight years later he joined the faculty of the Pacific Seminary in California as professor of systematic theology. He then went to Olivet, Mich., where he served as pastor of the college there and of the village church. From 1907 to 1916 he held the chair of history at Olivet College, serving also during 1914-16, as professor of philosophy. In 1916 he was named professor emeritus of history and philosophy. Non-resident professor of biblical literature at Lake Erie College, Painesville, Ohio, in 1919, he was an instructor in the Hebrew and Greek languages at the Oberlin Graduate School of Theology during 1926-33. A former editor of the *Bibliotheca Sacra*, he translated Grotius' *Defense* in 1889, and wrote *Seminary Method of Study in the Historical Sciences* (1888); *Fundamental Ideas of the Roman Catholic Church* (1899); *Christian Life and Theology* (1900), and *A Genetic History of the New England Theology* (1907). Also, he contributed the chapter on Zwingle's theology in Jackson's biography of Zwingle (1901).

FOULKE, WILLIAM DUDLEY, died May 30, 1935.

FRANQUI, EMILE, died Nov. 16, 1935.

FROST, EDWIN BRANT, died May 14, 1935.

FULLER, SIR (JOSEPH) BAMFFYLDE. English administrator in India, died at Marlborough, Wiltshire, Nov. 29, 1935. Born Mar. 20, 1854, he attended Marlborough College. In the service of the Indian Government, he served as Commissioner of Settlements and Agriculture in the Central Provinces in 1885 and as additional member of the Viceroy's Council in 1889. In 1901 he became secretary to the Government of India in the revenue and agricultural departments and from 1902 to 1905, served as Chief Commissioner of Assam. He was appointed the first Lieutenant Governor of Eastern Bengal and Assam in 1905, but resigned from the post the following year because of the vacillating policy of the India Office. During the World

War he served as temporary major in the army ordnance department (1915), director of timber supplies (1917), and invented the anti-gas alarm which was used extensively on the Western Front. Among the honors bestowed on him were: Companion of the Order of the Indian Empire (1892), Companion of the Order of the Star of India (1902), and Knight Commander of the Order of the Star of India (1906). His publications include: *Studies of Indian Life and Sentiment* (1910); *The Empire of India* (1913); *Life and Human Nature* (1914); *The Science of Ourselves* (1921); *Causes and Consequences* (1923); *The Law Within* (1926); *Ethereal Energies* (1928), and *Some Personal Experiences* (1930).

GAILOR, THE RT. REV. THOMAS FRANK, died Oct. 3, 1935. GANIENE, GEORGE ETIENNE. American sculptor, died at Hendersonville, N. C., July 29, 1935. Born in Chicago, Ill., Apr. 26, 1865, he was a pupil of the Art Institute there, and exhibited his work at the Buffalo Exposition (1901); St. Louis Exposition (1904), and the San Francisco Exposition (1915). In 1909 he received the Shaffer prize, the highest award of the Art Institute of Chicago for ideal sculpture. Mr. Ganiene was the official sculptor for the State of Florida and was a former instructor and director of the sculpture department of Stetson University, De Land, Fla., and director of the department of sculpture at Rollins College, Winter Park, Fla. His principal works include: "Baby Head," John Vanderpoel Memorial Collection, statues of Lincoln at Webster City, Ia and Burlington, Wis.; "Lincoln Fountain," Lincoln Highway, Chicago, Ill.; the equestrian statue of Gen. Anthony Wayne at Fort Wayne, Ind.; "Lincoln" and "Douglas," Chicago Historical Society; "Lincoln Memorial," Starved Rock, State Park, Ill.; "Dr. Frank W. Gunsaulus Memorial," Armour Institute of Technology, Chicago, head of Lincoln and "Meditation," Milwaukee Art Institute; "The Debator," Omaha Society of Fine Arts, and "Innocence," Fine Arts Gallery, De Land, Fla.

GARDNER, EDMUND GARRATT. English educator and writer, died July 27, 1935. Born in London, May 12, 1869, he attended Gonville and Caius College, Cambridge. Interested in the study of Italian literature and history he devoted much of his time to research in Italian archives and to the study of philology. From 1910 to 1926 he was Barlow Lecturer on Dante at University College, and from 1919 to 1923, held the chair of Italian Studies at Manchester University. The next two years were spent at the University of London as professor of Early Italian Language and Literature. He remained there as professor of Italian during 1925-34, becoming in the latter year, professor emeritus. Among the honors bestowed on him were: Officer of the Order of the Crown of Italy, 1921, British Academy Serena Medallist, 1922, Fellow of the British Academy, 1925, Commendatore of the Order of the Crown of Italy, 1929, and Grand Officer of that order, 1935. His publications include: *Dante's Ten Heavens* (1898); *A Dante Primer* (1900); *The Story of Florence* (1900); *Desiderio* (1902); *The Story of Siena and San Gimignano* (1902); *Dukes and Poets in Ferrara* (1904); *The King of Court Poets* (1906); *St. Catherine of Siena* (1907); *The Cell of Self-Knowledge* (1910); *The Painters of the School of Ferrara* (1911); *Dante and the Mystics* (1914); *The Book of St. Bernard on the Love of God* (1916); *The National Idea in Italian Literature* (1921); *Dante* (1923); *Tommaso Campanella and His Poetry* (1923); *Italian Literature* (1927); *The Arthurian Legend in Italian Literature* (1930), and *Virgil in Italian Poetry* (1931). Also, he edited *Companion to Italian Studies* (1934) and *St. Francis and the Birds* (1935).

GARRISON, LIEUT. COL. FIELDING HUDSON, U.S.A., RET. American medical historian, died in Baltimore, Md., Apr. 18, 1935. Born in Washington, D. C., Nov. 5, 1870, he received the A.B. degree from Johns Hopkins University in 1890 and the M.D. degree from Georgetown University in 1893. From 1889 to 1922 he was assistant librarian in the Surgeon General's office in Washington, D. C. Appointed a lieutenant in the Medical Reserve Corps, he served during the World War with the rank of major, and retired in 1930 with the rank of lieutenant colonel. From 1930 he was librarian of the Welch Medical Library. He was editor of *Index Medicus* during 1903-27 and associate editor of the *Quarterly Cumulative Index Medicus* during 1927-29. He wrote *Josiah Willard Gibbs and His Relation to Modern Science* (1909); *Physiology and the Second Law of Thermodynamics* (1909); *Tevis Illustrating the History of Medicine* (1912); *An Introduction to the History of Medicine* (1913, 4th ed., 1928); *John Shaw Billings, a Memoir* (1915); *A Physician's Anthology* (with Casey A. Wood, 1920); *History of Endocrine Doctrine* (1921); *History of Military Medicine* (1922); *History of Pediatrics* (1922); *History of Neurology* (1925); *The Principles of Anatomic Illustration Before Vesalius* (1925), and *Medicine in Space* (1934).

GERLACH, HELMUTH VON. German pacifist, died in Paris, France, Aug. 2, 1935. Born at Monchmotschewitz, Silesia, Feb. 2, 1866, he was educated for the law. From 1893 he wrote on anti-Semitic subjects. He helped to found the National Socialist party in 1899 and represented Marburg in the Reichstag during 1903-06. He became Under Secretary of the Interior in 1918, but resigned the post in March, 1919. A co-founder of the Democratic party in 1918, he left it in

1922 because of its conservatism. A former president of the League for German Rights, he was one of the group exiled from Germany in 1933.

GIARDINO, FIELD MARSHAL GAETANO ETTORE. Italian soldier, died at Turin, Nov. 21, 1935. Born at Montemagno, Italy, in 1864, he received his education at the Modena and Torino military schools, and was commissioned a lieutenant of the Bersaglieri in 1882. He served in the African and the Libyan wars, and on the entrance of Italy into the World War, became chief of staff with the Second Army. In August, 1915, he was promoted to the rank of brigadier general, and in the following June, commanded the 48th Brigade which played an important part in the attack on Gorizia. After his promotion to lieutenant general in 1917, he was recalled to Rome in June of that year to become Minister of War. Three months later he was created a senator in recognition of his services to the Italian government. Appointed chief of staff to General Diaz, in November, 1918, he was in command of Italian forces at Vittorio, and in a general attack on the Austrian lines forced the enemy to retreat. Promoted general in 1919, two years later, he was appointed member of the Army Council. He served as Military Governor of Fiume from September, 1923, until it was annexed by Italy under the terms of the Italo-Yugoslav Treaty. A minister of State in 1923 he was created a field marshal in 1926. He served as delegate to the Versailles Peace Conference and was awarded the Order of the Annunziata. His publications include *Piccole Fatti nella Bufera* (1924) and *Rievocazione e Riflessioni di Guerra I-III* (1929-30).

GILES, HERBERT ALLEN, died Feb. 13, 1935.

GILES, PETER, died Sept. 17, 1935.

GILLET, FREDERICK HUNTINGTON, died July 31, 1935.

GILMAN, CHARLOTTE PERKINS. American author and lecturer, died at Pasadena, Calif., Aug. 17, 1935. Born at Hartford, Conn., July 3, 1860, she began her public career in 1860, thereafter lecturing on social subjects and writing articles in various periodicals. From 1909 to 1916 she edited the *Forerunner* magazine. Besides lecturing frequently in Europe, she was the author of *Women and Economics* (1898); *In This Our World* (verse, 1898); *The Yellow Wallpaper* (1899); *Concerning Children* (1900); *The Home, Its Work and Influence* (1903); *Human Work* (1904); *What Diantha Did* (1910); *The Man-Made World* (1910); *The Crux* (1911); *Moving the Mountain* (1911), *His Religion and His* (1923).

GLAZEBROOK, SIR RICHARD TETLEY, died Dec. 16, 1935.

GOMEZ, JUAN VICENTE, died Dec. 17, 1935.

GOSSEIN, L. L. T. See LENOTRE, GEORGES

GOTSHALL, WILLIAM CHARLES. American civil and electrical engineer, died in New York City, Aug. 20, 1935. Born in St. Louis, Mo., May 9, 1875, he began his career in 1892 with the Missouri Electric Light and Power Co., but later entered the service of the U.S. Government in the capacity of engineer in charge of work along 150 miles of the Mississippi River. He was locating engineer for the St. Louis and Eastern Railroad, and rebuilt the Cairo (Ill.) Electric Ry., the Grand Avenue Ry. in St. Louis, and was then appointed chief engineer of the Union Depot Ry. Co. of St. Louis. In the latter capacity he rebuilt the entire system and introduced the three-wire system on electric railways. In 1897-98 he changed the Second Avenue Ry. in New York City from horse power to a conduit electric railway. As president and chief engineer of the New York and Portchester R.R. Co., he figured in the development of high speed electric traction. This road was the first high speed railway to be built in the United States on a private right of way. Also, he engaged in the development of electric railways and in the purchase and rehabilitation of railroads in the United States, Europe, and Africa. A fellow of the American Association for the Advancement of Science, the American Museum of Natural History, and the American Geographical Society, he was the author of *Electric Railway Economics* (1914), and contributed the article on railway economics to the *Encyclopedia Americana*. A major in the Engineer Reserve Corps in 1917, he saw active service and was keenly interested in organizing and directing archeological excavations in the Near East.

GOULD, JAY. American sportsman, died at Margareville, N. Y., Jan. 26, 1935. Born at Lakewood, N. J., in 1889, he was graduated from Columbia University in 1911. In 1905 he became runner-up in the annual amateur court tennis tournament at Tuxedo, N. Y.; the next year, he won, and became American champion. He retained the title for 20 years (1906-26), at the end of which time he retired from competition. In 1907 and 1908 he won the amateur court tennis title of England, the only American to do so, and in the latter year, won the world title at the Olympic Games. In 1914 he defeated G. Frederick Covey of England, the recognized world open champion, becoming the only amateur court tennis player to have held an open title. In 1917, Mr. Gould staged a come-back and engaged in doubles contests, in which he was successful. Due to ill health he retired in 1932. Gould was reputed to have been the greatest amateur the game of court tennis had ever known.

GREELY, MAJ.-GEN. ADOLPHUS W., U.S.A., RET., died Oct. 20, 1935.

GREEN, ANNA KATHARINE. See ROHLFS, ANNA KATHARINE GREEN.

GREENDLINGER, LEO. American accountant, died en route to New York, Oct. 11, 1935. Born in Austria, Aug. 22, 1879, he attended the Royal Seminarium in Vienna and then took up the study of law. He migrated to the United States in 1900 and became engaged in the manufacture of fur. In 1904 he turned to the educational field and became vice principal of Paine's Business College in New York. During 1905-07 he was president of the South Brooklyn Business College, and in the latter year became editor of the C.P.A. Question Department of the *Journal of Accountancy*. During 1907-15 he was assistant professor of accountancy at New York University and from 1907 to 1912, a practicing and consulting accountant. In 1912 he began a long association with the Alexander Hamilton Institute, which he served first as director and treasurer, then as vice president in 1925, and general manager from 1929. His publications include: *Accountancy Problems with Solutions* (2 vols., 1909); *Graded Accounting Problems* (with R. H. Dennis, 3 vols., 1910); *Accounting Principles and Practice* (1910); *Financial and Business Statements* (1917), and *Retail Financing* (with Percy H. Johnson, 1927).

GREIN, J. T. English dramatic critic, died in London, June 22, 1935. Born in Amsterdam, The Netherlands, Oct. 11, 1862, he received his education in Holland, Germany, and Belgium. From 1888 to 1891 he served as dramatic critic of *Life* and later served on the *Sunday Special*, *Sunday Times* (1897-1918), *Ladies' Field* (1905-18), and *Financial News* (1911-14). From 1920 he contributed a column to the *Illustrated London News* and was dramatic critic on *Sketch*, a weekly. Also, he was London editor of the New York *Theatre Magazine*. In 1891 he founded the Independent Theatre and in 1901 introduced the German Theatre in London. Among other of his enterprises were the People's Theatre, founded in 1923, and the Cosmopolitan Theatre. From 1925 he served as Consul General and Commercial Attaché for the Liberian Republic in London. Mr. Grein celebrated the jubilee of his professional career in 1933, at which time he was created an Officer of the Order of Orange-Nassau. Other honors bestowed on him include: Officer de l'Instruction Publique of France, Knight Commander of the Liberian State Order, Knight of the Order of Leopold of Belgium, and Knight of the Order of St. Olav, first class, of Norway. He was the author of *Dramatic Criticism* (5 vols., 1899-1905); *A Dream of Charity* (1911); *Cameos* (1920); *The World of the Theatre* (1920); *The New World of the Theatre* (1924).

GRENFELL, HELEN LORING (Mrs. EDWIN I.) American sociologist, died in Denver, Colo., July 26, 1935. Born at Valparaiso, Chile, she received the M.A. degree from the University of Denver in 1904. She was married to Edwin I. Grenfell in 1889. Elected superintendent of schools in Gilpin Co., Colo., for three successive terms, she was also elected State superintendent of public instruction in Colorado three times, and served from 1899 to 1905. As State superintendent, she was largely responsible for increasing the school revenues by the leasing of State lands. Also, she revised and annotated the school laws. In 1909 she was appointed commissioner of the State Penitentiary and Reformatory and of the State Insane Asylum, and controlled the penal institutions of Colorado. She retained the post up to 1930. In 1918 she went to England as a member of the American Mission which was invited by the British government. While there she spoke on war issues and investigated war conditions in England and France. A delegate to the Democratic National Convention in 1920, she was vice president of the Colorado Equal Suffrage Association, and a director of the Colorado Prison Association and of the Colorado State Forestry Association for 14 years.

GROSSMITH, GEORGE, died June 6, 1935.

GRUBB, WILLIAM IRWIN. American jurist, died in Birmingham, Ala., Oct. 27, 1935. Born in Cincinnati, O., Mar. 8, 1862, he received the A.B. degree from Yale University in 1883, and took up the study of law at the Cincinnati Law School. On his admittance to the bar in 1884, he began practice in Cincinnati and then removed to Birmingham, Ala., where he practiced up to 1909. In the same year President Taft appointed him a United States District Judge in the Northern District of Alabama. In this capacity Judge Grubb ruled that the NRA was unconstitutional and handed down late rulings concerning the TVA and the PWA. He was a member of former President Hoover's Law Enforcement Committee appointed in 1929 to study crime and criminal law in the United States.

GRUENBERGER, ALFRED. Austrian cabinet officer and diplomat, died in Paris, France, Apr. 25, 1935. He was born in Karlsbad, Bohemia, about 1875, and entered the Austrian Civil Service in 1898. He embarked on a political career in 1920 when he was appointed Minister of Public Provision. In June, 1921, he became Food Minister and in this capacity, aided greatly in overcoming the postwar food crisis in Austria. In 1921 he took over the portfolio of commerce in the Seipel Ministry and from 1922 to 1924, was Minister of Foreign Affairs. In 1925 he was appointed Ambassador to France, and served until 1932. In the same year he resigned from the Austrian diplomatic corps and took up permanent residence in Paris.

GUENIOT, ALEXANDER. French surgeon, died in Paris, July 16, 1935. Born at Tignescourt, Department of Vosges,

Nov. 8, 1832, he received his education at Trinity College, Lamoignon. During 1863-65 he was chief of the Obstetrical Clinic, and from 1865 to 1894 served in the capacity of surgeon to several Paris hospitals. He joined the faculty of medicine at the University of Paris in 1869 and taught there until 1878. Dr. Guéniot was president of the Société de Chirurgie (1883), of the Société Obstétricale et Gynécologique at Paris (1888), of the Société Obstétricale of France (1895), and of the Académie de Médecine (1906). A prolific writer on medical subjects, he was the oldest member of the French Academy of Medicine and attained the age of 102 years.

GUERRA, JOSÉ SÁNCHEZ. Spanish premier, died in Madrid, Jan. 26, 1935. Born in Córdoba, June 30, 1859, he was educated for the law. He was a successful lawyer and journalist, first in Córdoba and then in Madrid. He entered politics in 1886 on his election to the Cortes where he represented a district of Córdoba. With the exception of one term, he held this seat continuously until Primo de Rivera established a dictatorship on Sept. 13, 1923. During 1903-04 he was Minister of Government (Interior) in the first Maura (Conservative) ministry, and from September, 1908, to October, 1909, was Minister of Promotion under Premier Antonio Maura y Montaner. Elected President of the Cortes in 1917, he retained the office up to Mar. 8, 1922, when he succeeded Maura as head of the government. He resigned from this post on Dec. 6, 1922. Meanwhile, on the death of Eduardo Dato, he became leader of the Conservative party in March, 1921. During de Rivera's dictatorship, Guerra served as director of the Madrid newspaper, *El Español*. In 1927, he entered into voluntary exile and planned a constitutional government. In February, 1929, an unsuccessful attempt at revolution was made, failure being due to the delay of Guerra's ship. The military commander at Valencia, believing the revolt to have fallen through, surrendered to General de Rivera. Despite his denials of any knowledge of the plot, Guerra was brought to trial by court martial on a charge of fomenting revolution, but was acquitted. On the collapse of the Spanish throne in April, 1931, a constitutional government assumed control, and he ran as a Conservative for leader of the Constituent Assembly, but was defeated by the Socialist candidate. He then retired. As a brilliant speaker in Parliament and as director of *La Iberia*, he established a distinguished reputation.

GUTELIUS, FREDERICK PASSMORE. American railway official, died at North Bay, Ont., Canada, Sept. 12, 1935. Born at Mifflinburg, Pa., Dec. 21, 1864, he was educated at Lafayette College, Easton, Pa., from which he received the C.E. degree in 1887. He began his career as engineer in charge of the construction of a sewer system in Englewood, N. J. (1887), becoming assistant engineer of the Pennsylvania Railroad's lines west of Pittsburgh (1888). After serving as assistant supervisor for that company in 1892 he went to Butte, Mont., where he engaged in hydraulic engineering during 1892-94. Next he became county surveyor in Silver Bow Co., Mont. (1895), and then went to Canada to take charge of the construction of the Trail Creek Tramway in British Columbia. There he served as general superintendent of the Columbia and Western R.R. and on its acquisition by the Canadian Pacific Ry. in 1898, became divisional superintendent. During 1910-12 he was general superintendent of the Canadian Pacific's eastern division at Montreal. In the latter year, the Canadian government appointed him general manager of the Canadian Government Railways and during his term a surplus of \$1,000,000 was realized from lines that theretofore had not paid operating expenses. Also, he was a member of the Royal Commission which investigated the construction of the National Transcontinental Ry. In June, 1917, he became vice president in charge of operation and traffic of the Delaware and Hudson Co. and when the government assumed control of the railroads, he was named Federal manager. From 1923 he was resident vice president of the Delaware and Hudson Co. He invented the smoke jack for railroad engine houses and made improvements on the farm gate.

GUTHRIE, WILLIAM DAMERON, died Dec. 8, 1935.

HAFKEN, LOUIS F. American public official, died in New York City, Dec. 25, 1935. Born at Melrose, Westchester Co., N. Y., Nov. 6, 1854, he received the C.E. degree from the Columbia University School of Mines in 1879. Named an engineer in the Department of Parks in New York City in 1883, he served in that capacity up to 1893. As commissioner of street improvements in the 23d and 24th wards of New York City which were later a part of the Borough of the Bronx, he effected many improvements and had street maps drawn and filed. On the creation of Greater New York in 1897, he was elected the first president of the Borough of the Bronx. He was reelected to the office in 1901, 1903, and 1905, and in August, 1909, six months before the expiration of his term, he was removed from office by Governor Charles Evans Hughes, after charges of maladministration had been preferred by John Purroy Mitchell and Ernest Yale Gallagher, Commissioner of Accounts. From 1918 to 1929 he was consulting engineer to the Borough.

HANSON, GEORGE CHARLES. American diplomat, died at sea, Sept. 2, 1935. Born in Bridgeport, Conn., Oct. 11, 1883, he received the C.E. degree from Cornell University in 1908, and entered the diplomatic service in the following

year. He began as student interpreter in China, and in 1911 was deputy consul general and later interpreter at Shanghai. In 1912-13 he was vice and deputy consul and interpreter at Chefoo, serving in that capacity at Dalny (1913-14), Tientsin (1914-15), and Newchwang (1915). After serving as consul at Swatow during 1915-17, he went to Chungking in the same capacity, and in 1918, to Foochow. From 1922 to 1931 he was consul at Harbin, and from 1931 to 1933 was consul general there. On the recognition of the Soviet government by the United States in 1933, he was sent to Moscow as the first United States Consul General. In February, 1935, he was assigned to Addis Ababa as First Secretary and Consul General, but illness prevented his taking up the post. Instead, he was sent to Saloniki as Consul General.

HARRIS, ABRAHAM WINEGARDNER, American educator, died Feb. 21, 1935, in Philadelphia, where he was born Nov. 7, 1858. He was graduated from Wesleyan University in 1880, becoming in the same year, a teacher of mathematics in Dickinson Seminary, Williamsport, Pa. In the following year he returned to Wesleyan University where he was tutor in mathematics and registrar during 1881-84, and instructor in history to 1888. He then became a member of the U.S. Department of Agriculture, serving first as assistant director of the Office of Experimental Stations, and as director in 1891. Two years later, he resigned to become president of the University of Maine. From 1901 to 1906 he was headmaster and director of the Tome School in Baltimore, and in the latter year, assumed the presidency of Northwestern University. He held this office up to 1916. In the same year he became corresponding secretary of the Board of Education of the Methodist Episcopal Church, and from 1924 was secretary of that body. Chairman of the executive board of the Religious Education Association from 1910 to 1916, he was president of the American Social Hygiene Association (1915-17), and vice president of the Committee of 15 of Chicago (1915-16).

HARRIS, CORRA MAY WHITE (Mrs. I. H.), American author, died in Atlanta, Ga., Feb. 9, 1935. Born at Farm Hill, Ga., Mar. 17, 1869, she received a private education. In 1887 she was married to the Rev. Lundy Howard Harris who died in 1910. Two years after her marriage she began writing for the *Independent*, and in 1905 first contributed her *Brasstown Valley Stories* to the *American Magazine*. From 1931 she wrote a column in the *Atlanta Journal*. Her publications include: *The Jessica Letters* (with Paul Elmer More, 1904), *A Circuit Rider's Wife* (1910), *Love's Second Husband* (1910), *Recording Angel* (1912), *In Search of a Husband* (1913), *Co-Citizens* (1915), *Making Her His Wife* (1918), *Happy Married* (1920), *My Son* (1921), *Daughter of Adam* (1923), *House of Helen* (1923), *My Book and Heart* (1923), *As a Woman Thinks* (1925), *Flapper Anne* (1925), and *Happy Pilgrimage* (1927).

HARRISON, RICHARD BERRY, American Negro actor, died in New York City, Mar. 14, 1935. Born in London, Ont., Canada, Sept. 28, 1864, he attended the public schools there. Embarking on a theatrical career in 1889, he began acting in Canada, subsequently touring the United States on the Chautauqua and Lyceum circuits as a dramatic reader. He then taught dramatic art in North Carolina for many years, and from 1921, was a teacher of dramatics and elocution at the Agricultural and Technical College at Greensboro, N. C. He came into prominence in 1930 when he appeared in the rôle of "de Lawd" in Marc Connelly's phenomenal success, *The Green Pastures*. (See THE NEW INTERNATIONAL YEAR BOOK for 1930 under *Theatre*.) Mr. Harrison played in that production over 1650 times. In 1931 he was awarded the Spingarn medal for the "most outstanding achievement among colored people" in 1930.

HASSAM, CHILDE, died Aug. 27, 1935.

HAZZARD, JOHN EDWARD, American actor and author, died at Great Neck, N. Y., Dec. 2, 1935. Born in New York City, Feb. 22, 1881, he received his education in the public schools there and first appeared on the stage in 1901 in *The Man from Mexico*. After touring with *The Two Orphans* in 1902, *The Yankee Consul* (1903-04), and *Mrs. Wilson* in 1906, he returned to New York in 1907 to appear at Wallack's Theatre in *The Hurdy-Gurdy Girl*, and in the following year, in *The Girls of Gottenburg* at the Knickerbocker Theatre. After touring with *The Candy Shop* in 1909, he played in *The Echo* at the Globe Theatre, N. Y., in 1910. Before going on tour with *Miss Princess* in 1913, he appeared in *The Red Rose*, *The Duchess*, and *The Gypsy*. In New York again, he made subsequent appearances in *The Lilac Domino* (1914), *Very Good, Eddie* (1915), *Miss Springtime* (1916), *La, La, Lucille* (1919), *The Night Boat* (1920), *Tangerine* (1921), *For Goodness' Sake* (1922), *One Kiss* (1923), *Bye, Bye, Barbara* (1924), the Gilbert and Sullivan piece, *H. M. S. Pinafore* (1926), and *The Houseboat on the Styx* (1928). Mr. Hazzard was co-author of *Turn to the Right* (1916), *Go to It* (1916), and *The Houseboat on the Styx*. He wrote *Nunkie* (1919), and for several years prior to his death, conducted a column, *Few Kind Words*, in the *Great Neck News*.

HEADLEY, ROWLAND GEORGE ALLANSON ALLANSON-WINN, FIFTH BARON, English civil engineer, died June 22, 1935 in London, where he was born Jan. 19, 1855. He received the B.A. degree from Trinity College, Cambridge, in 1878,

winning high honors in mathematics. After engaging in educational work, he served as editor of the *Salisbury Journal*. From 1885 to 1892 he was secretary to Sir F. Seager Hunt and in the latter year, he took up civil engineering. After engaging in foreshore protection work in Ireland, he went to India where he completed the road between Baramula and Srinagar in 1896. His one venture into politics was unsuccessful when he contested South Kerry in 1891. He was named engineer to the Arklow Harbor Commissioners in 1906 and five years later, he succeeded to the title. Lord Headley was converted to the Mohammedan religion in 1913 and subsequently became president of the British Moslem Society. After his pilgrimage to Mecca in 1923, he was privileged to use the prefix Al Hajj. Also, he was made a member of the Order of the Nahda of Arabia, first class, by the late King Hussein of the Hedjaz. A fellow and former president of the Society of Engineers, London, he was a member of the Institute of Civil Engineers of Ireland and received the following awards: Bessemer Premium of the Society of Engineers, London (twice), silver medal of the Royal Scottish Society of Arts (1900), and the silver medal of the Institute of Civil Engineers of Ireland (1902-03). His publications include: *Boxing, All England Series* (1888); *Boxing, 1stman Series* (1897); *Foreshore Protection* (1899); *Notes on Road Construction* (1901); *Proceedings of the American Society of Civil Engineers* (1902); *Self-Defense* (1903), *Youghal Foreshore Protection Works* (1903), *Sea Coast Erosion and Remedial Works* (1904), and *Submerged Chasm Cable, Groynes* (1906).

HEINTZELMAN, MAJ.-GEN. STUART, U.S.A. American soldier, died at Hot Springs, Ark., July 6, 1935. He was born in New York City, Nov. 19, 1876. On his graduation from the United States Military Academy in 1899, he was commissioned a second lieutenant in the cavalry and went to the Philippines where he remained during 1900-02. Also, he served in China, and from 1909 to 1912 was an instructor in the Army Service Schools, in which capacity he served again in 1914-16. In the following year, he was an instructor at Princeton University and on the entry of the United States into the World War, went abroad detailed to the operations section at General Headquarters until January, 1918. Six months later he was named chief of operations with the First Corps and in September of the same year, chief of staff with the Fourth Corps. Until it was demobilized in April, 1919, he was chief of staff of the Second Army. Following his return to the United States in July, 1919, he was named director of the Army War College, and from 1921 to 1924, served as assistant chief of staff there. Then he was assigned to the Command and General Staff School at Ft. Leavenworth, Kan., where he was commandant from 1929 to 1935. Meanwhile, in 1931, he was promoted to the rank of major general. In February, 1935, he assumed command of the Seventh Corps Area. His decorations include the Distinguished Service Medal of the United States, the Croix de Guerre of France, and commanderates in the French Legion of Honor and in the Order of the Crown of Italy.

HENDERSON, RT. HON. ARTHUR, died Oct. 20, 1935.

HENNING, EDWARD J., American jurist, died in Toledo, O., Sept. 6, 1935. Born at Iron Ridge, Dodge Co., Wis., Dec. 28, 1868, he received the LL.B. degree from Columbian (now George Washington) University in 1896. In the following year he established a law practice in Milwaukee. In 1901 he became assistant United States attorney for the Eastern District of Wisconsin, and during 1910-11, was United States attorney. In 1913 he removed to San Diego, Calif. From 1921 to 1925, he was assistant Secretary of Labor in President Coolidge's Cabinet and in this capacity, became prominent in his efforts to restrict the immigration laws. President Coolidge appointed him United States district judge for the Southern District of California in 1925. He retained the post up to 1930 when he became industrial relations counsel on the "Big Five" Motion Picture Theatre Circuits. From 1932 he practiced general law in Los Angeles, Washington, and New York City. Judge Henning was general counsel for the International Order of Moose and was head of the American delegation to the World Conference on Emigration and Immigration held in Rome in 1924. Also, in May, 1925, he was a member of the American delegation to the conference with Mexico held at El Paso to draft the border treaty.

HENNIQUE, LEON, French writer, died in Paris, Dec. 25, 1935. Born at Basse-Terre, Guadeloupe, French W.I., in 1851, he was educated in the French schools at Brest and Saint Quentin. A prolific writer, he collaborated with Huysmans and Iaudet, and wrote *La Dévouée* (1878); *Un Caractère* (1891), and the plays, *La Mort du duc d'Enghien* (1883), which was produced five years later, and *Jacques Danour* (1890).

HERFORD, OLIVER, American author, died in New York City, July 5, 1935. Born in England, December, 1863, he was educated at Lancaster College, England, Antioch College, Ohio, and studied art at the Slade School in London and at the Académie Julian in Paris. He illustrated his own books; the illustrations fittingly supplementing his individual and eccentric comicality and whimsicality. During 1932-33 he contributed to the "March of Events" section in the *New York American*. His publications include: *The Bash-*

ful Earthquake, and Other Fables and Verses (1898); *Alphabet of Celebrities* (1899); *A Child's Primer of Natural History* (1899); *More Animals* (1900); *Overheard in a Garden* (1900); *Rubaiyat of a Persian Kitten* (1904); *The Fairy God-Mother-in-Law* (1905); *The Astonishing Tale of a Pen and Ink Puppet* (1907); *Hearticulture* (1908); *Simple Geography* (1909); *Cupid's Fair Weather Book* (1909); *Peter Pan Alphabet* (1909); *Cupid's Encyclopedia* (1910); *Happy Days* (with J. Cecil Clay, 1911); *Kitten's Garden of Verses* (1911); *The Bishop's Purse* (with Cleveland Moffett, 1913); *The Mythological Zoo* (1914); *Jingle Jungles* (1915); *Confessions of a Caricaturist* (1917); *Cynic's Calendar* (1917); *The Laughing Willow* (1918); *This Giddy Globe* (1919); *The Herford Æsop* (1921); *Neither Here nor There* (1922); *Excuse It, Please* (1930); *Sea Legs* (1931), and *The Deb's Dictionary* (1931). His plays include: *The Devil, The Florist Shop, The Love Cure, and Con and Co*.

HIRSCHFELD, MAGNUS German eugenicist, died in Nice, France, May 15, 1935. Born at Kolberg, Germany, July 14, 1868, he attended Breslau, Strassburg, Munich, Berlin, and Heidelberg universities. He served as a physicist in Magdeburg in 1894, and in Charlottenburg during 1896-98. After further study in Paris, London, and Berlin, he became a sex-disease specialist. In 1908 he was joint editor of the *Periodical for Sexology*, and from 1910, practiced as a neurologist in Berlin. A co-founder of the Medical Society of Sexology in 1913, he helped found, five years later, the Institute of Sexology in Berlin which later came under the control of the Prussian State. In connection with the latter, he opened a Bureau for Matrimonial Advice in 1919. Also, he founded, with August Forel and Havelock Ellis, the World League of Sexual Reform, and later served as president of that body. In May, 1933, the Institute was closed by the government and Hirschfeld was exiled. He then removed to France. His publications include *Die Transvestiten* (2 vols., 1910-12); *Die Homosexualität* (1914); *Sexual Pathologie* (2 vols., 1917); *Sexual Zwischenstufen* (1922); *Sexualität und Kriminalität* (1924), and *Sexual-Katastrophen* (with L. Klaber and G. Lahardt, 1916).

HITCHCOCK, ALBERT SPEAR American botanist, died at sea, Dec. 16, 1935. Born at Owosso, Mich., Sept. 4, 1865, he received the M.S. degree from Iowa Agricultural College in 1886. In the same year, he became an assistant in chemistry at the State University of Iowa, and three years later, served in the same capacity at the Missouri Botanical Garden in St. Louis. In 1892 he was invited to occupy the chair of botany at the Kansas Agricultural College, but resigned the chair nine years later, to join the United States Department of Agriculture as assistant agrostologist. In 1905 he became systematic agrostologist and from 1924, was principal botanist in charge of systematic agrostology. He held the office of president in the Botanical Society (1914), the Botanical Society of Washington (1916), and the Washington Biological Society (1923). Dr. Hitchcock was an authority on the taxonomy of grasses.

HITCHCOCK, FRANK HARRIS, died Aug. 5, 1935.

HOCKING, SILAS KITTO English novelist, died in London, Sept. 15, 1935. Born at St. Stephen's, Cornwall, Mar. 24, 1850, he received a private education and was ordained to the ministry of the Methodist Church. He held pastorates in Pontypool, Spalding, Liverpool, Manchester, and Southampton, and before retiring from the ministry, in 1896, he turned to writing. In 1879 he wrote *Her Benny* which is his best-known book and still widely read in England. A prolific writer, he produced more than 50 novels, some of which are *Dick's Fairy* (1883); *Real Girl* (1887); *Where Duty Lies* (1891); *A Son of Reuben* (1894); *In Spite of Fate* (1897); *Gripped* (1902); *The Silent Man* (1906); *The Third Man* (1911); *Watchers in the Dawn* (1920); *The Mystery Man* (1930), and *Gerry Storm* (1934).

HOLMES, OLIVER WENDELL, died Mar. 6, 1935.

HOLTBY, WINIFRED English author, died in London, Sept. 29, 1935. Born in 1898, she attended Somerville College, Oxford. From 1926 she was director of the weekly, *Time and Tide*. Her best-known work was *Mandao*, a description of the coronation of Haile Selassie, Emperor of Ethiopia. Her last work, *Take What You Want*, was completed one month before her death. It was published in the United States under the title, *South Riding*. Her other publications include *Audrey and Wold*, *The Crowded Street*, *The Land of Green Gincer*, *Poor Caroline*, *Truth Is not Sober*, and numerous pamphlets.

HOPPER, (WILLIAM) DE WOLF, died Sept. 23, 1935.

HORTON, BRIG.-GEN. WILLIAM EDWARD, U.S.A., RET. American soldier, died at Governors Island, N. Y., Sept. 13, 1935. Born in Washington, D. C., June 28, 1868, he received the LL.B. degree from Georgetown University in 1892 and for the next five years was engaged in the practice of law in Washington. On the outbreak of the Spanish-American War, he was commissioned a first lieutenant and adjutant in the First District of Columbia Infantry and saw service in Cuba and the Philippines. When the United States entered the World War, he was appointed assistant to the Quartermaster General, in charge of construction service, with the rank of brigadier general. Since his retirement at his own request in 1929, he practiced law in Washington. General Horton was one of the most widely decorated officers in the Service, being the recipient of the Disting-

guished Service Medal of the United States and of numerous foreign decorations.

HOUGH, WALTER. American anthropologist, died in Washington, D. C., Sept. 20, 1935. Born at Morgantown, W. Va., Apr. 23, 1859, he received the Ph.D. degree from the University of West Virginia in 1894. He became connected with the United States National Museum in 1886 in the capacity of aid, thereafter serving as assistant curator of the ethnology division from 1896 to 1910, and curator of ethnology from 1912. Also, during 1920-23, he was acting head curator of anthropology there, and head curator from 1923. In 1892 he went to the Columbian Historical Exposition in Madrid as a member of the United States Commission, and was created a Knight of the Order of Isabella of Spain. A member of the J. Walter Fewkes's expedition to Arizona in 1896, he went to Mexico with Dr. J. W. Rose three years later, and made extensive explorations in the Southwest in 1901, 1904, and 1905. Dr. Hough was an authority on Eskimo lamps, Hopi ethnobotany and pigments, Korean ethnography, the Pueblo region of Arizona, and Malayan ethnography. In addition to being a corresponding member of the Society of Anthropology of Paris and the Swedish Society of Anthropology and Geography, he was a fellow of the American Association for the Advancement of Science and vice president of the anthropology section of that body in 1904. President of the Anthropology Society of Washington in 1908, he held the same office in the American Anthropology Association in 1923-24.

HUBBARD, THEODORA KIMBALL (MRS. HENRY VINCENT). American author, died at Milton, Mass., Nov. 7, 1935. Born at Newton, Mass., Feb. 26, 1887, she received the S.B. degree from Simmons College in 1908. She was married to Henry Vincent Hubbard on June 7, 1924. From 1911 to 1924 she was librarian in the School of Landscape Architecture at Harvard University, and from 1924 to the time of her death, was special adviser there. From 1929 she was editor of *Research*, the organ of the School of City Planning of Harvard University, and associate editor of *Landscape Architecture*. From April, 1918, to May, 1919, she was consulting librarian and chief of the Reference Library of the U.S. Bureau of Industrial Housing and Transportation, and was an expert on zoning information on Secretary Hoover's Advisory Committee on Zoning. She was a member of the committee on research of the President's Conference on Home Building and Home Ownership and of the American City Planning Institute. She wrote with J. S. Pray, *City Planning—a Comprehensive Analysis* (1913), and with H. V. Hubbard, *Introduction to the Study of Landscape Design* (1917, 4th ed., 1929). Also, *Landscape Architecture Classification* (1920), and *Manual of Information on City Planning and Zoning* (1923). Besides compiling *References on City Planning* in 1915 and editing the professional papers of Frederick Law Olmsted, Senior, she contributed the sections on town planning and landscape architecture to the *Encyclopedia Britannica*.

HULSEN, CHRISTIAN K. F. German historian and archaeologist, died in Florence, Italy, Jan. 19, 1935. Born at Charlottenburg, Germany, Nov. 29, 1858, he received his education at the University of Berlin where he studied under Mommsen. After engaging in teaching for several years, he succeeded G. W. Helbig as director of the German Archaeological Institute at Rome in 1887, remaining there until 1909. In the following year, he came to the United States as exchange professor at Columbia University, New York. Also, he lectured before the Archaeological Institute of America. From 1917 he held a professorship at Heidelberg University. He wrote *Die Thermen des Carcalla* (1898), *Forum Romanum* (1904); *Topographie der Stadt Rom in Altertum* (1897), *Die Thermen des Agrippa* (1910); *Il Libro di Giuliano di Sangallo* (1910); *Roms Antiken-garten* (1917), *Forum und Palatin* (1926), and *Le Chiese di Roma nel Medio Evo* (1927). Hulsén also contributed articles to German and Italian archaeological journals.

HUNTINGTON, JAMES OTIS SARGENT American clergyman, died in New York City, June 29, 1935. Born in Boston, Mass., July 23, 1854, he received the B.A. degree from Harvard University in 1875. He then studied at St. Andrew's Divinity School during 1876-79, and in the following year, was ordained a priest of the Protestant Episcopal Church. He was assigned to the Calvary Mission in Syracuse, N. Y., and in 1881, to the Holy Church Mission, where he remained up to 1889. In 1884 he founded the Order of the Holy Cross, a monastic order of the Protestant Episcopal Church and from 1921, was superior of that body. He wrote *How to Preach a Mission* and *The World of Prayer*.

HUSSAREK VON HEINLEIN, MAX, BARON Austrian cabinet officer, died in Vienna, Mar. 6, 1935. Born at Pressburg, May 3, 1865, he received the LL.D. degree from the University of Vienna in 1889. In 1892 he was a law clerk in the Ministry of Ecclesiastical Affairs and Public Instruction, and became professor of church law at the University of Vienna in 1895. In 1911 he was given the portfolio of Education and held it for six years. Appointed Chancellor of Austria in July, 1918, he held the post for three months. He was the author of many books on canon law.

HUTCHINSON, JOHN IRWIN. American mathematician, died in Ithaca, N. Y., Dec. 1, 1935. Born in Bangor, Me., Apr. 12, 1867, he received the Ph.D. degree from the Uni-

versity of Chicago in 1896. In 1894 he joined the faculty of Cornell University as instructor in mathematics, becoming assistant professor in 1903, and from 1910, full professor. A fellow of the American Association for the Advancement of Science, he was a former vice president of the American Mathematical Society, and during 1902-04, served as associate editor of *Transactions*. He was co-author with Virgil Snyder of *Differential and Integral Calculus* (1902), and *Elementary Treatise on the Calculus* (1912). Also, he wrote many reviews for mathematical journals, chiefly on hyperelliptic, theta, and automorphic functions, on algebraic surfaces and birational transformations.

IPPOLITOV-IVANOV, MICHAEL MICHAELLOVITCH, died Jan. 28, 1935.

ISHIKAWA, CHIYOMATSU. Japanese zoologist, died at Taihoku, Formosa, Jan. 17, 1935. Born in Tokyo in April, 1861, he was graduated from the College of Science in Tokyo in 1882, and continued his studies in Germany, receiving the Ph.D. degree from the University of Freiburg. Appointed a professor in the College of Science on his return to Japan, he was called to the chair of Zoology, Entomology, and Sericulture in the College of Agriculture in the University of Tokyo in 1890. As an author he wrote *Animal Evolution and Anatomical Guide*, besides writing numerous articles on zoological subjects.

JAGOW, GOTTLIEB VON. German Foreign Minister, died in Potsdam, Jan. 11, 1935. Born in Berlin, June 22, 1863, he was educated at the University of Bonn and became a lieutenant in the Landwehr. Entering the diplomatic service in 1895, he served as attaché at Rome. In 1897 he was named Secretary to the Embassy there and after serving as Minister to Luxembourg for a year, returned to Rome as Ambassador in 1909. Three years later, he assisted in securing the renewal of the Triple Alliance. He was recalled to Germany in 1913, to succeed von Kiderlen-Waechter as Minister of Foreign Affairs. In that capacity he had charge of diplomatic affairs leading up to the World War, and had to defend the attack on the *Lusitania*. For a time he was successful in restraining submarine warfare. In 1916 he resigned his portfolio and retired to private life. His *Ursachen und Ausbruch des Weltkrieges*, published in 1919, was a defense of the German policy during the War. Six years later, he published *England and the Outbreak of the World War*, in reply to Lord Grey's *Memoirs* (1925).

JELlicoe, JOHN RUSHWORTH JELlicoe, First Earl, died Nov. 20, 1935.

JENKINS, OLIVER PEBLES. American educator and ichthyologist, died at Palo Alto, Calif., Jan. 9, 1935. Born at Bantam, O., Nov. 3, 1850, he received the M.A. degree from Moores Hill College (Ind.) in 1872 and the Ph.D. degree from Indiana University in 1889. From 1876 to 1882, he was professor of natural science at Moores Hill College. Then, he taught at the Indiana State Normal School during 1883-86. In the latter year, he was invited to occupy the chair of biology at De Pauw University. On the opening of Leland Stanford University in 1891, he joined the faculty as professor of physiology and histology. He held the chair up to 1916 when he was retired as professor emeritus. Also, during 1892-1916, he was co-director with C. H. Gilbert of the Stanford Marine Laboratory. A fellow of the American Association for the Advancement of Science, he wrote the Indiana State Series of text books on physiology. Dr. Jenkins was an authority on the nervous system invertebrates and on Hawaiian, American, and Mexican fishes.

JOHNSTON, MOFFAT. Scottish actor, died at Norwalk, Conn., Nov. 3, 1935. Born in Edinburgh, Scotland, Aug. 18, 1886, he attended the University of Edinburgh. As a member of the F. R. Benson Shakespearean company, he made his first appearance on the stage in Manchester in September, 1905. Three years later, he played in *Much Ado About Nothing* at the Coronet Theatre in London. Before coming to the United States in 1922, he played numerous Shakespearean rôles in London, and served in the World War as a lieutenant with the Eighth Sherwood Foresters. His first New York appearance was in *Back to Methuselah*, at the Garrick Theatre. He subsequently played in *King Lear*, *Hamlet*, *The Little Angel*, *The Wild Duck*, *Accused*, *Cock Robin*, *Becky Sharp*, *An Affair of State*, *Berlin*, *Camille*, and in Sean O'Casey's *Within the Gates*.

JONES, WALTER. American physiological chemist, died Feb. 28, 1935, in Baltimore, Md., where he was born Apr. 28, 1865. He received the Ph.D. degree from Johns Hopkins University in 1891 and for the next four years, was engaged in teaching at Wittenberg College and Purdue University. Joining the faculty of Johns Hopkins University in 1895, he served successively as assistant and associate professor during 1895-1908, and as full professor of physiological chemistry from 1908 to 1927. In the latter year he retired as professor emeritus. A fellow of the American Association for the Advancement of Science, he wrote *Nucleic Acids* (1921).

JOVENAL, HENRI DE, died Oct. 4, 1935.

JUDD, EDWARD STARR. American surgeon, died in Chicago, Ill., Nov. 30, 1935. Born at Rochester, Minn., July 11, 1878, he received the M.D. degree from the University of Minnesota in 1902, and while serving his internship at

St. Mary's Hospital at Rochester, he came under the influence of Dr. Charles H. Mayo. In 1907 he became a surgeon at the Mayo Clinic and from 1918, was professor of surgery at the Mayo Foundation in the Medical School of the University of Minnesota. In later years, he was chief of the surgical staff of Mayo Clinic. Also, he was a surgeon at St. Mary's Hospital. A fellow of the American College of Surgeons and of the American Medical Association, he was president of the latter body in 1931-32. Dr. Judd was an authority on biliary, gastro-intestinal, and genito-urinary tracts, and the thyroid.

JUNGREN, OSCAR. Swedish-American engineer, died in Schenectady, N. Y., Sept. 24, 1935. Born at Landskrona, Sweden, Jan. 10, 1865, he received a degree in mechanical engineering from the Malmö Engineering College in 1885. On coming to the United States, he settled in New York where he joined the Edison Electric Co. in 1889. Two years later he began his association with the General Electric Co. in its Schenectady office. He was associated with W. L. R. Emmett in designing and constructing the first large Curtis turbine which was finished in 1903. Four years later he was named design engineer in the turbine department, and in 1922, consulting engineer in that department. He served in that capacity up to his retirement in 1934, and was engaged chiefly in the development of the electro-steam turbine. During his career he registered 130 patents for his inventions. In 1931 the General Electric Co. bestowed the Charles A. Coffin award on him for his work on turbine units.

JUNKERS, HUGO, died Feb. 3, 1935.

KELLNER, MAX. American theologian and Orientalist, died in Cambridge, Mass., Aug. 5, 1935. Born in Detroit, Mich., May 21, 1861, he received the M.A. degree from Harvard University in 1885, and after simultaneous study at the Cambridge Theological School, the B.D. degree in 1885. Then he joined the faculty of the latter institution, serving successively as instructor in Hebrew (1887-91), assistant professor of Old Testament languages (1891-98), and full professor (1898-1907). From 1907 to 1922 he was professor of the literature and interpretation of the Old Testament. In the latter year, he retired as professor emeritus. His publications include *The Prophecies of Isaiah* (1895); *The Standard Inscription of Ashurnasirpal* (brochure, 1895); *The Assyrian Monuments Illustrating the Sermons of Isaiah* (1900); *An Outline Study on the History of the Hebrews* (1901); *An Outline Study on the Old Testament Literature and Religion* (1902), and *Magic—Its Origin and Survivals* (1934).

KEMPE, HARRY ROBERT. English electrical engineer, died at Brockham, Apr. 10, 1935. Born in 1852, he attended King's College, London, and began a three-year association with Sir Samuel Canning. He subsequently worked with Sir Charles Wheatstone and Sir W. H. Preece who were pioneers of the British telegraphy service. In 1871 he joined the Postal Telegraph Service at Southampton and on his retirement in 1913, he was principal technical officer and electrician to the Post Office. Also, he was examiner to the late inventions committee of the Air Ministry. Besides publishing the *Engineer's Year Book*, he wrote *Handbook of Electrical Testing*; *The Electrical Engineer's Pocket-Book*; *Alternating Currents*, and many papers on electrical subjects.

KENDAL, DAME MADGE (MRS MARGARET ROBERTSON GRIMSTON), died Sept. 14, 1935.

KINGSFORD-SMITH, AIR COMMODORE SIR CHARLES EDWARD, was lost Nov. 7-8, 1935.

KINGSMILL, ADMIRAL SIR CHARLES EDMUND. Canadian naval officer, died on Grindstone Island, Rideau Lakes, Ont., July 15, 1935. Born at Guelph, Ont., July 7, 1855, he entered the British Navy in 1869 and saw service in the Sudan (1884) and in the South Pacific for the next five years. In 1894 he was given command of the *Blenheim*. In 1908 he became rear admiral and returned to Canada to take over command of the Marine Service there. On his retirement from the active list in 1910, he was named director of the Canadian Naval Service. He served in that capacity up to 1920. In 1917 he was promoted to the rank of admiral on the retired list. He was the only Canadian to hold the rank of admiral in the Royal Navy. Admiral Kingmill's decorations include the Egyptian medal, bronze star, Officer of the Legion of Honor of France and Grand Officer of the Order of the Crown of Italy. In 1918 knighthood was conferred upon him.

KIRBY, GEORGE HUGHES. American psychiatrist, died at Portsmouth, N. H., Aug. 11, 1935. Born at Goldsboro, N. C., Feb. 9, 1875, he received the B.S. degree from the University of North Carolina in 1896, and the M.D. degree from the Long Island College Hospital and Medical School, New York, three years later. Between the years 1902-27, he served in various capacities in clinical psychiatry, psychopathology, mental diseases, and as director of the New York Psychiatric Institute. Of these, his 10-year term as professor of psychiatry at the Cornell University Medical College was outstanding. He joined the faculty of the College of Physicians and Surgeons of Columbia University, and held the chair of psychiatry up to his retirement in 1933. A member of the Medical Corps, U.S.A., in the World War, he helped organize a unit for the care of soldiers suffering from mental or nervous dis-

orders. From 1919 he was a consultant in neuro-psychiatry for the U.S. Public Health Service. A former president of the American Psychiatric Association, the New York Neurological Society, and the New York Society of Clinical Psychiatry, Dr. Kirby was an authority on alcohol psychoses, race psychopathology, and manic-depressive psychoses.

KITCHEN, KARL KINGSLEY. American newspaper man, died in New York City, June 21, 1935. Born in Cleveland, O., Mar. 2, 1885, he was graduated from Cornell University in 1906 and began his newspaper career on the staff of the Cleveland *Plain Dealer*. Removing to New York City, he joined the *Evening World* for which he wrote the "Man About Town" column. When publication of that paper ceased, he went over to the New York *Sun* and there conducted a similar column up to 1933. In the next year he entered into a partnership with Robert Adamson (q.v.) and Ray D. Lillibridge in a public relations firm. Besides being the author of *The Night Side of Europe* and *After Dark in the War Capitals*, he traveled extensively and wrote many magazine articles and syndicated reviews.

KOLLE, WILHELM. German bacteriologist, died at Weisbaden, Germany, May 10, 1935. Born at Lerbach, Nov. 2, 1868, he attended the universities of Göttingen, Halle, and Würzburg, and received the M.D. degree in 1892. In the next year, he joined the Robert Koch Institute for infectious diseases in Berlin and during 1897-99, directed an expedition to South Africa where he studied the treatment of leprosy and rinderpest (cattle plague). Again, in 1900, he led a similar expedition to the Sudan at the invitation of the Egyptian Government. Six years later, he was invited to occupy the chair of bacteriology at the University of Bern. In 1915 he succeeded to the directorship of the Chemo-Therapy Research Institute at Frankfurt, and in addition, became director of the State Institute of Experimental Therapy. On the League of Nations Hygiene Committee, he served as a member of the permanent standardization commission for therapeutical and bacteriological medicine. At the time of his death, he was engaged in cancer research. Dr. Kolle was co-author of *Handbook of Pathogenic Micro-Organisms* (1902) and *Book for Experimental Bacteriology* (1904).

KONDOURIOTIS, PAUL, died Aug. 22, 1935.

KOOK, CHIEF RABBI ABRAHAM ISAAC IACOMEN. Zionist leader, died near Jerusalem, Sept. 1, 1935. He was born at Graiva, near Dvinsk, Latvia, about 1865. He became a rabbi at Busk, Russia, and in 1904, accepted a rabbinate at Jaffa, Syria. He began to rebuild the city of Tel-Aviv and, in the capacity of president of the People's Court, which exercised official authority over litigations involving Jews of Palestine, he came to be known as the modern Solomon of Palestine. He founded the Yeshiva Merkazit Olmait in 1922 and thereafter served as its leader. He came to the United States in 1924 to attend the Zionist conference. Chief Rabbi Kook was consulted in 1929 by British authorities about the Arab disorders in Palestine. In 1933, he ordered a world fast as a protest against the persecution of Jews in Germany.

KOSLOFF, PETER KISMITCH. Russian scientist, died in Leningrad, U.S.S.R., Sept. 27, 1935. Born in Smolensk, Russia, in October, 1863, he was educated in Russian universities, where he specialized in archaeology, paleontology, and the Asiatic languages. His first expedition was to Central Asia in 1883-85 and four years later, he visited Chinese Turkestan with Nikolai Prjevalsky, his teacher, and subsequently worked in eastern Tienchan and Nanchan. His first independent expedition to the Mongolian Desert was in 1899, when he discovered Khara Khot. There he found statues and relics, and books in an ancient dialect—Sissya. His chief aim was to find the tomb of Genghis Khan, and during 1907-09, he was exploring in the Gobi Desert. His exploration was interrupted by the outbreak of the World War, but he resumed his work on the end of that conflict, this time financed by the Soviet Government. Crossing the Gobi again in 1925, he discovered the graves of several Hunnish princes. A report of this expedition was issued by the Russian Academy in that year. In 1929, in a small monastery near Khara Khot, he found a royal tomb, thought by many to be the long-sought tomb of Genghis Khan. However, Kosloff was never certain that this was so.

KOSTER, ROLAND. German diplomat, died in Paris, France, Dec. 31, 1935. He was born at Mannheim, Germany, in 1885. He entered the Foreign Service in 1913, becoming attaché at the Ministry of Foreign Affairs. Three years later, he was named secretary to the German Legation at The Hague, and in 1920, was appointed Counselor and Chargé d'Affaires at the Legation in Brussels. Transferred to the Legation at Prague in 1923 he subsequently received the appointment of Minister to Norway (1928-29), and then became director of the personnel department of the Ministry of Foreign Affairs. In 1932 he was appointed Ambassador to France, and in that capacity, skillfully represented Germany in such delicate situations as the discussions with Foreign Minister Laval on the Saar question, and with Chancellor Hitler, German Foreign Minister Baron Constantin von Neurath, and Ambassador François Poncet, of France, on such matters as the

Locarno treaty, the Rhineland zone, and the possible return of Germany to the League of Nations.

KUHN, MAJ.-GEN. JOSEPH ERNST, U.S.A., RET. American soldier, died at San Diego, Calif., Nov. 12, 1935. Born at Leavenworth, Kan., June 14, 1864, he was graduated from the United States Military Academy in 1885 and from the United States Engineering School at Willets Point, N. Y., in 1888. Between the years 1889-1900, he served as engineer in charge of rivers, harbors, fortifications, and government buildings. Assigned to foreign duty in the Philippines, Japan, and China during 1903-05, he was military observer with the Japanese armies in 1904-05, and on his return to the United States the next year, was again assigned to engineering projects. He was occupied with the latter up to 1914 and the following year was sent to Berlin as military attaché at the United States Embassy there. In the United States again, he was given command of the 79th Division and served in Hawaii during 1920-23. He retired in 1925.

KUBYSHYEV, VALERIAN VLADIMIROVICH. Soviet public official, died in Moscow, U.S.S.R., Jan. 25, 1936. Born in Omsk, Siberia, in 1888, in 1904 he joined the Revolutionary Party, and was frequently imprisoned and exiled. In the Civil War against the Czechoslovaks and the Kolchaks, 1918-20, he served as a member of the Revolutionary Military Council, and in the following year became Soviet Plenipotentiary to Bokhara, and head of the State Electrification Committee. Subsequently he was secretary of the Central Committee of the Communist Party (1922); People's Commissar for Peasants' and Workers' Inspection (1923-26); chairman, Supreme Economic Council (1926-30); vice chairman, Council of People's Commissars (1927-29; 30-35), chairman, State Planning Commission, Gosplan (1931-34), which made him chief administrator of the second Five-Year Plan, and chairman, Commission of Soviet Control (1935). In the early days of the Soviet Government, Kubyshyev was considered one of the "big three" in Russian politics, the others being Stalin and Rykov.

LACHAISE, GASTON, died Oct. 18, 1935.

LARA, ISIDORE DE. English composer, died in Paris, France, Sept. 2, 1935. Born in London, England, Aug. 9, 1858, he studied the piano with H. Aguilar and made his first public appearance at the age of 13. After studying composition with Mizzucato and singing with Lamperti at the Conservatory in Milan, he received the Grand Prix for composition, and then returned to London where he composed songs and appeared as a singer. His operas, *The Light of Asia* and *Amy Robart* were produced in London in 1892 and 1893 respectively, *Mona* and *Messalina* in Monte Carlo in 1897 and 1899, *Le reveil de Bouddha* in Ghent, 1904, *Sanga* in Nice, 1906; *Solea* in Cologne, 1907; *Nail* in Paris, 1912; *Les trois masques* in Marseilles, 1913, and in Dusseldorf, 1913; *Le Vohier Blanc*, *Le Prince de Marocana*, and *The Three Musketeers*, all in Cannes. De Lara was made an officer of the French Legion of Honor, and a Commander of the Order of the Crown of Italy.

LAWRENCE, COL. THOMAS EDWARD, "LAWRENCE OF ARABIA," died May 19, 1935.

LEAN, CECIL. American actor, died in New York City, July 18, 1935. Born in London, Ont., Canada, July 7, 1878, he first came into prominence in 1903 when he played in *Miss Simplicity*. Going to Chicago in the same year, he appeared in *The Time, the Place and the Girl* at the La Salle Theatre. Returning to New York in 1908, he subsequently played in *Bright Eyes*, *The Military Girl* (his own work), and *The Man with Three Wives*. After appearing in London in 1914 at the Victoria Palace, he returned to New York the following year and played various rôles in *The Blue Paradise*, *Miss 1917*, *Look Who's Here*, *The Blushing Bride*, *Innocent Eyes*, *No No Nanette*, and *Everybody's Welcome*. His last appearance was in *The Bishop Misbehaves*. Mr. Lean was at one time associated with the late Florenz Ziegfeld and from 1912, appeared in many successes with his wife, Cleo Mayfield.

LEE, VERNON. See PAGET, VIOLET.

LENÔTRE, GEORGES (pseudonym of L. L. T. GOSSELIN). French author, died in Paris, Feb. 7, 1935. Born at Richemont, Lorraine, Oct. 7, 1857, he received his education at the École des Jésuites at Metz, and at the Collège de la Malgrange. Elected to the French Academy in 1932, he was a member of the Commission du Vieux-Paris, and the Société de l'Histoire de Paris et de l'Île-de-France. A historian of note, he was the author of many works on the French Revolution. His publications include: *La Guillotine pendant la Révolution* (1893); *Le Marquis de la Rouerie* (1898); *Mémoires et souvenirs sous la Révolution et l'Empire*; *Le Drame de Varennes* (1905); *Les Massacres de septembre* (1907); *Bleus, Blancs, et Rouges* (1912); *Les Noyades de Nantes* (1912), and *Prussiens d'hier et de toujours* (1915).

LEVI, SYLVAIN, died Oct. 31, 1935.

LEWIS, JOHN. Canadian journalist, died May 18, 1935, in Toronto, where he was born, Jan. 17, 1858. He abandoned the study of law to take up newspaper work in 1881 when he joined the staff of the Toronto *World*. From 1892 to 1902 he was editorial writer on the Toronto *Globe* and later

became editor-in-chief of the *Star*. In 1920 he served as editor of Liberal publications at Ottawa, but resigned the following year to return to the Toronto *Globe*. In 1925 he was summoned to the Canadian Senate. Senator Lewis wrote *British Diplomacy and Canada* (1907); *Democracy* (1908); *Life of George Brown* (1906, "Makers of Canada Series"); and *Mackenzie King, the Man, His Achievements*.

LICHTENBERG, LEOPOLD. American violinist, died in Brooklyn, N. Y., May 16, 1935. Born in San Francisco, Nov. 22, 1861, he began studying the violin with Beaudjardin and made his first public appearance at the age of eight. In 1873 he came under the tutelage of Henri Wieniawski and spent three years in Brussels with him. Then he studied under Lambert in Paris, and after further study with Wieniawski, won first prize at the Brussels Conservatory in 1876. Following his return to the United States, he was soloist with the Theodore Thomas concerts in 1877 and toured Europe during the next three years. Back in the United States, he played with the Boston Symphony Orchestra for a time and then settled in New York where he became head of the violin faculty of the National Conservatory of Music in 1899. He was a member of the Margulies Trio that came to rank with the foremost chamber-music organizations in the United States.

LIEBERMANN, MAX, died Feb. 8, 1935.

LIGGETT, LIEUT. GEN. HUNTER, U.S.A., RET., died Dec. 30, 1935.

LIGGETT, WALTER WILLIAM. American editor and newspaper publisher; assassinated in Minneapolis, Minn., Dec. 9, 1935. Born at Benson, Minn., Feb. 14, 1886, he attended the Minnesota Agricultural College during 1904-05, becoming, in the latter year, a newspaper reporter. In that field, he served successively as managing editor of the *skagway Alaska* (1908-10), the *Fargo (N. Dak.) Courier-News* (1917-18), and the *New York Call* (1922). Also, during 1923-25, he worked on various newspapers in New York and began free lance writing in 1925. From 1930, he was editor of the magazine, *Play Talk*. Liggett attacked the administration of Governor Olson in his *Midwest American*, which was established in Minnesota in October, 1933. This weekly was allied with the Farmer-Labor Party in Minnesota. His publications include: *The Frozen Frontier* (1926); *The River Riders* (1927); *Pioneers of Justice* (1930); and *The Rise of Herbert Hoover* (1932).

LIJ YASU. Former ruler of Ethiopia, died at Mount Cara Mouleta, November, 1935. Born at Wollo-Gallo, in 1897, he reigned between the years 1913-16, being deposed in the latter year for his leanings toward Mohammedanism, because of which he was excommunicated from the Ethiopian Coptic Church, and for his failure to overcome enmity with tribal chiefs. He was succeeded by his cousin, Ras Tafari, who became Haile Selassie I of Ethiopia. See *ETHIOPIA* under *History*.

LIMANTOUR, JOSE YVES. Mexican statesman, died in Paris, France, Aug. 26, 1935. Born in Mexico City, Dec. 26, 1854, he was educated for the law. Appointed Minister of Finance in the government of Porfirio Diaz he held the portfolio from 1893 to 1911. During his administration of the office, he effected many economic reforms, among which were the elimination of the alcabala, a tax on all sales of real estate and merchandise, the establishment of a monetary system on the gold basis, and the consolidation of railways into a national system controlled by the government. When the Diaz government was overthrown in 1911, Limantour left the country and settled in Paris. In 1907 he was elected to the French Academy of Science, the first Mexican to be so honored for his financial achievements.

LINDENTHAL, GUSTAV, died July 31, 1935.

LINSINGEN, GEN. ALEXANDER VON. German soldier, died in Hanover, June 5, 1935. Born at Hildesheim, Hanover, Feb. 10, 1850, he entered the Prussian Army in 1868 and was commissioned a lieutenant in the 17th Infantry Regiment the following year. He served in the Franco-Prussian War (1870-71) and received the Iron Cross. In 1909 he commanded the second army corps at Stettin with the rank of lieutenant general. In the World War he was active first on the Western Front, where he commanded troops in the battles of Mons, the Marne, and in the early fighting at Ypres. In 1914 he took over a command on the Eastern Front, aided the Austrians in the Carpathian Mountains, and defended the Austro-German front against the Russian advance. The crowning point of his career was reached when he recovered Galicia and took the fortress at Brest-Litovsk. He led his troops into the Ukraine in March, 1918, and was promoted to the rank of colonel general by the Kaiser. In June of that year, he was appointed commander-in-chief of Brandenburg. His plan to put down the revolution in Berlin, in November, 1918, by an airplane bombardment was thwarted by the War Ministry and he resigned and went into retirement in Stettin and Hanover.

LITTLE, ARTHUR D(ERON), died Aug. 1, 1935.

LOCATELLI, ACHILLE, CARDINAL. Italian prelate of the Roman Catholic Church, died in Rome, Apr. 5, 1935. Born at Seregno, Milan, Mar. 15, 1856, he attended the seminaries of Monza and Rome and was ordained a priest in 1879. He was sent to Spain as Papal Legate in 1884 and subsequently represented the Vatican in Brussels, Paris, and Vienna. Following his return to Rome in 1889, he

served as attaché to the Papal Secretary of State. In 1906 he was named Titular Bishop of Thessalonica. Then he went to South America where he spent 10 years as Intercuncio to Argentina, Paraguay, and Uruguay. In 1916 he was in Belgium in the same capacity, and in 1918, in Spain. On the elevation of Cardinal Achille Ratti to the papacy as Pope Pius XI in 1922, he was raised to the cardinalate and given charge of the Church of San Bernardo alle Terme. He became protector of the archconfraternity of Lombards and Cardinal protector of the Brothers of the Holy Family. Cardinal Locatelli was the author of two books on dogmatic theology.

LODER, BERNARD CORNELIUS JOHANNES, died Nov. 4, 1935.

LOEFFLER, CHARLES MARTIN TORNOW, died May 19, 1935.

LONG, HUEY (PIERCE), died Sept. 10, 1935.

LONG, RAY. American editor, died at Beverly Hills, Calif., July 9, 1935. Born at Lebanon, Ind., Mar. 23, 1878, he received a common school education and entered the field of journalism. In 1900 he joined the staff of the *Indianapolis News* as a reporter, becoming, five years later, managing editor of the *Cincinnati Post*. He served in that capacity on the *Cleveland Press* during 1908-10, and the following year, was associate editor of *Hampton's Magazine*. Between the years 1911-18, he was editor of various magazines, and from 1919 to 1931 was president and editor-in-chief of the *International Magazine Co.*, publishers of William Randolph Hearst's *International-Cosmopolitan*, *Good Housekeeping*, *Harper's Bazaar*, *Motor*, and *Motor Boating*. During 1931-32 he was chairman of the board of directors of Ray Long and Richard Smith, Inc., a book-publishing firm which went into bankruptcy in 1933. About this time he removed to Hollywood where he was editor of *Photoplay*, a movie magazine.

LORAINE, ROBERT, died Dec. 24, 1935.

LUKEMAN, (HENRY) AUGUSTUS, died Apr. 3, 1935.

LUMSDEN, DAME LOUISA INNES. Scottish educator, died at Edinburgh, Jan. 2, 1935. Born Dec. 31, 1840, she attended Girton College, Cambridge, where she remained as classical tutor during 1873-75. She became a member of the staff of Cheltenham Ladies' College in 1875 and two years later, was the first headmistress of St. Leonard's School, St. Andrews. She filled that post until 1882. Three years later, she became the first warden of University Hall for Women at the University of St. Andrews, and retired in 1900. Dame Lumsden was a member and chairman of two school boards in Aberdeenshire from 1888 to 1890, and was created Dame Commander of the Order of the British Empire in 1925. Also, she was a Governor of Girton College and a leader of the woman suffrage movement in Scotland. She wrote *Lessons in German*, "Position of Women in History" in *The Position of Women, Actual and Ideal*, "Education of Women in St. Andrews" in *Votive Tabella*, the Quincentenary Book of St. Andrews, *Memories of Aberdeen, a Hundred Years Ago*, and *Yellow Leaves, Memories of a Long Life* (1933).

LYON, DAVID GORDON. American Orientalist, died in Boston, Mass., Dec. 4, 1935. Born at Benton, Ala., May 24, 1852, he received the A.B. degree from Howard College, Alabama, in 1875, and the Ph.D. degree from the University of Leipzig in 1882. On his return to the United States he joined the faculty of Harvard University where he served successively as Hollis professor of divinity (1882-1910), and Hancock professor of Hebrew and other Oriental languages. He retired as professor emeritus of the latter chair in 1922. In 1891 he was named the first curator of the Semitic Museum. During 1906-07, he directed the American School for Oriental Study and Research at Palestine. A fellow the American Academy of Arts and Sciences, Dr. Lyon was recording secretary of the American Oriental Society during 1886-95, and president of the Society of Biblical Literature in 1910. He wrote *Keilschrifttexte Sargons Konigs von Assyrien* (1883); *An Assyrian Manual* (1886), and *Harvard Excavations at Samaria, 1908-10* (co-author, 2 vols., 1924). Also, he edited with George F. Moore in 1912, *Studies in the History of Religions*.

MCCADAMS, CLARK. American newspaper editor, died in St. Louis, Mo., Nov. 29, 1935. Born in Jersey Co., Ill., Jan. 29, 1874, he attended Shurtleff College, Ill. He became editor of the Alton (Ill.) *Republican* and subsequently joined the staff of the St. Louis *Post-Dispatch*, succeeding in 1929 to full charge of its editorial page on which he conducted for more than 20 years, the column "Just a Minute." Much of his own verse, especially his *Panetela* verses, so-called because of their slender construction, with two or three words to the line, also appeared on this page. During 1929-30, he was part-time instructor in journalism at Washington University. His chief avocation was the conservation of wild life, and as an authority on migratory birds, he was appointed on the Federal Advisory Board on Migratory Birds in 1913, and served as a member until 1932. Also, he was a founder of the St. Louis Artists Guild and its president from 1913. The study of archeology, another avocation from boyhood, led to the publication of his only book, *Archeology of Illinois*.

MACBETH, JAMES CRUICKSHANK HENDERSON. Scottish code expert, died in New York City, Mar. 21, 1935. Born in Aberdeen, Scotland, about 1877, he attended the University

there, and received the M.D. degree. In 1912 he became associated with the Marconi Wireless Telegraph Co., Ltd., in London and devised the *International Code Book*. An expert cryptographer, Macbeth was employed during the World War in deciphering code messages for the British Government. Later, for the Marconi Co., he came to the United States in the further development of commercial codes and in the issuance of the *Wireless Press*, a monthly publication of the company. Also, he became an authority on the game of bridge and was the author of *Common Sense in Auction*, as well as of an earlier work, *Cryptography*.

MCCLENAHAN, HOWARD. American scientist and educator, died in Winter Park, Fla., Dec. 16, 1935. Born at Port Deposit, Md., Oct. 19, 1872, he received the E.E. degree from Princeton University in 1895 and the M.S. degree in 1897. From the latter date, he served on the faculty of Princeton University in the successive capacities of instructor (1897-1902); assistant professor (1902-06), and full professor of physics (1906-12). Dr. McClenahan served as dean of Princeton from 1912 until his retirement in 1925, when he became secretary of the Franklin Institute, Philadelphia, and editor of the Institute's journal. Also, from 1930, he was director of the Benjamin Franklin Memorial and the Franklin Institute Museum. For his study of the relief needs of the Belgians during the World War, he was decorated with the Order of the Crown of Belgium in 1919, and in the same year, served as president of the Association of Colleges and Preparatory Schools of the Middle States and Maryland. He wrote *Laboratory Directions in Experimental Physics* (1906).

MCCRAE, THOMAS. American physician, died in Philadelphia, June 30, 1935. He was born in Guelph, Ont., Canada, Dec. 16, 1870, and after graduating from the University of Toronto in 1891, he took post-graduate courses in London, Edinburgh, Gottingen, and at Johns Hopkins Hospital in Baltimore. He became an associate in medicine at the last of these institutions in 1904, leaving in 1912 to occupy the chair of medicine at Jefferson Medical College, Philadelphia, where he remained up to the time of his death. In 1924 Dr. McCrae was Lumleian lecturer at the Royal College of Physicians in London, and in 1930, served as president of the Association of American Physicians. He collaborated with the late Sir William Osler in writing *Cancer of the Stomach*, and was editor of *Osler's System of Medicine and of Osler's Practice of Medicine*, in the original publication of which he collaborated with Dr. Osler.

MCCURDY, JAMES FREDERICK. Canadian Orientalist, died in Toronto, Mar. 30, 1935. Born in Chatham, N. B., Feb. 18, 1847, he attended the University of New Brunswick, the Theological Seminary at Princeton, N. J., and the universities of Gottingen and Leipzig. He taught Semitic languages at Princeton from 1873 to 1882, and from 1888 until his retirement as professor emeritus in 1914, he occupied the chair of Oriental languages at the University of Toronto. He was accredited with a reading knowledge of 20 Oriental languages. He directed the American School of Oriental Research in Jerusalem during 1911-12, and wrote *Aryo-Semitic Speech* (1881); *History, Prophecy, and the Monuments* (3 vols., 1894-96, 1901), and *Life of D. J. Macdonnell* (1897), as well as several commentaries on books of the Bible.

MCDONNITT, THE MOST REV. PHILIP RICHARD. American Roman Catholic bishop, died in Harrisburg, Pa., Nov. 11, 1935. Born in Philadelphia, July 12, 1858, he was graduated from La Salle College there in 1877, and then he attended St. Charles Borromeo Theological Seminary, Overbrook, Pa. Ordained to the priesthood in 1885, he served as assistant rector of the Church of the Nativity of the Blessed Virgin Mary in Philadelphia up to 1899 when he was named superintendent of the parochial schools of Philadelphia. Created a Domestic Prelate with the title of monsignor in 1910, he was named Bishop of Harrisburg in 1916. A former president of the American Historical Society in 1910, Bishop McDonnitt attained national eminence for his work in developing the educational system in Catholic institutions and in strengthening the Catholic press.

MACKEY, JAMES. American author and educator, brother of Percy Mackaye, the dramatist, died in Boston, Jan. 22, 1935. Born in New York City, Apr. 8, 1872, he received the B.S. degree from Harvard University in 1895. He was a research engineer in Boston for 28 years, and subsequently lectured in philosophy at Dartmouth College. He became known as an authority on mathematical philosophy, and presented to the American Philosophical Society at its 29th annual meeting, held at Columbia University in December, 1929, a radiation theory to replace the Einstein theory of relativity. During 1931-32 he was a lecturer in philosophy at Rollins College, Winter Park, Fla., and in 1932, was invited to the chair of philosophy at Dartmouth College. His works include: *The Economy of Happiness* (1906); *The Politics of Utility* (1906); *The Happiness of Nations* (1915); *Americanized Socialism* (1918); *The Logic of Conduct* (1924); *The Dynamic Universe* (1931), and *Thoreau—Philosopher of Freedom* (1931).

MACKENZIE, SIR ALEXANDER CAMPBELL, died Apr. 28, 1935.

M'KENZIE, DAN. British physician, died Nov. 19, 1935. He attended Glasgow University and after practicing general medicine for a time, he specialized in diseases of the throat, nose, and ear. He was president of the Otolaryngological (1926-27) and Laryngological (1929) sections of the Royal Society of Medicine and a fellow of the Royal Anthropological Society. A consulting surgeon to the Central London Throat and Ear Hospital, he was consulting Otolaryngologist to the French Hospital in London, and the Chiswick, Ealing, and Wimbledon Hospitals. Besides editing the *Journal of Laryngology* during 1911-20, he wrote *Diagnosis in Diseases of Throat, Nose, and Ear* (1908); *Diseases of the Throat, Nose, and Ear* (1920), and *Diathermy in Oto-Laryngology* (1930).

MACKENZIE, JOHN STUART. British philosopher, died at Chepstow, Dec. 6, 1935. Born near Glasgow, Feb. 29, 1860, he received the M.A. degree from Glasgow University in 1882 and then attended the universities of Cambridge and Berlin. In 1895 he was invited to occupy the chair of logic and philosophy at University College of South Wales and Monmouthshire, and retired as professor emeritus in 1915. President of the Moral Education League from 1908 to 1916, he lectured in India and America during 1920-23, and wrote *An Introduction to Social Philosophy* (1890, 2d ed., 1895), *A Manual of Ethics* (1893, 6th ed., 1929); *Outlines of Metaphysics* (1902, 3d ed., 1929); *Elements of Constructive Philosophy* (1917); *Outlines of Social Philosophy* (1918); *Fundamental Problems of Life* (1928), and *Cosmic Problems* (1931).

MCLEAN, ANGUS WILTON. American administrator, died in Washington, D. C., June 21, 1935. Born in Robeson Co., N. C., Apr. 20, 1870, he studied law at the University of North Carolina and established a practice in Lumberton in 1892. After serving as county attorney during 1892-1904, he formed a partnership with his cousin Neill Archibald McLean, and J. G. McCormick. Later he became senior partner in the law firm of McLean, Varser, and McLean. He organized and was president of the Bank of Lumberton from 1898 to 1914. Chairman of the Democratic executive committee of Robeson County in 1892 he was delegate-at-large to the Democratic National Convention of 1904 and 1912, and from 1916 to 1924 a member of the Democratic National Committee. During 1918-20 McLean was director of the War Finance Corporation in Washington and managing director of same in 1920-21. He served as Assistant Secretary of the Treasury and as a member of the Treasury's railway loan advisory committee in the same year. In 1925 he took office as governor of North Carolina for the term ending 1928, after winning the election by the largest majority ever given a candidate in that State. During his term of office he introduced prison administration reform and established a budget system. He was a former president of the North Carolina Bar Association and of the Scottish Society of America.

MCLENNAN, SIR JOHN CUNNINGHAM, died Oct. 9, 1935. MACLEOD, JOHN JAMES RICHARD, died Mar. 16, 1935. MADDEN, SIR CHARLES EDWARD, died June 5, 1935. MACONIGLE, H. (AROLD) VAN BUREN, died Aug. 29, 1935. MANNERS, CHARLES (SOUTHCOTE MANSERGH). English operatic bass, died in Dublin, I. F. S., May 3, 1935. Born in London, Dec. 27, 1857, he studied music with Dr. O'Donoghue in Dublin, at the Royal Academy of Music in London, and in Florence, Italy. He began his career with the D'Oyly Carte Opera Company in London, and made his first success in *Iolanthe*. From 1887 to 1890 he was the principal bass of the Carl Rosa Opera Company, and in the next two years, sang at Covent Garden and Drury Lane theatres in London. Soon after arriving in New York in 1893, he sang at the Seidl Orchestral Concerts and in 1896-97, was on a professional tour in South Africa. Later, with his wife, Fanny Moody, he organized the Moody-Manners Opera Company which presented grand opera in Great Britain and Ireland.

MARKBT, CURTIS FLETCHER. American geologist, chief of the U.S. Soil Survey, died in Harbin, Manchuria, in August, 1935. Born in Lawrence Co., Mo., July 19, 1863, he attended the University of Missouri and Harvard University. From 1890 to 1895, he was assistant geologist for the Missouri Geological Survey. In the latter year he joined the faculty of the University of Missouri, serving successively as instructor in geology (1895-97); assistant professor (1897-99), and full professor (1899-1911). He assumed charge of the Soil Survey of the U.S. Department of Agriculture in 1910, and from 1924 was chief of that division. He was pedologist for the Crude Rubber Survey in the Amazon Valley in 1923. Markbt received the American Geographical Society's Cullum medal in 1930.

MAKINKOVIC, VOYISLAV, died Sept. 18, 1935.

MAKLOWE, THOMAS. English newspaper editor, died at sea, Dec. 5, 1935. Born at Portsmouth, Mar. 18, 1868, he attended Queen's College, Galway, and the medical college of the University of London. Abandoning medicine for the newspaper field, he served first as a reporter, then as news editor, and in 1899, managing editor of the *Daily Mail*. During his régime, the *Daily Mail* published the Zinoviev letter (see NEW INTERNATIONAL YEAR BOOK for 1924,

p. 313). He retired in 1926 after more than 25 years as editor. From 1918 to 1926 he was chairman of Associated Newspapers, Ltd.

MARTIN, FRANKLIN H., died Mar. 7, 1935.

MATHEWS, JOHN ALEXANDER. American metallurgist, died at Scarsdale, N. Y., Jan. 11, 1935. Born at Washington, Pa., May 20, 1872, he received the M.S. degree from Washington and Jefferson College in 1896. Removing to New York in the same year, he became an assistant in assaying at Columbia University and received the Ph.D. degree from that institution in 1898. In 1900 he went to London and studied at the Royal School of Mines under Sir Roberts-Austen. Following his return to the United States, he became associated with the Crucible Steel Co. of America in 1902, as assistant manager of the Sanderson Works (1902-08), general manager and president of the Halcumb Steel Co. (1908-20), and as president of the Crucible Steel Co. (1920-23). From 1923 he was vice president and director of research for that concern. Among the honors bestowed on him were the Barnard Fellowship for Encouragement of Scientific Research (1900-01-02), the first award of the "Andrew Carnegie Gold Medal for Research" by the British Iron and Steel Institute (1902), and the Robert W. Hunt gold medal by the American Institute of Mining and Metallurgical Engineers (1928). Dr. Mathews was an authority on the metallurgy of iron and alloy steels, being keenly interested in electric furnace steel processes.

MAXWELL, BRIG. GEN. SIR ARTHUR. British banker, died in London, Jan. 20, 1935. Born in Belfast, Ireland, in 1875, he received his education in Dublin. Entering the Civil Service in 1893, he served in the Post Office until 1905 when he joined the banking firm of Glyn, Mills, and Co., in the capacity of secretary. In the World War he served successively as captain in the Eighth London Regiment, lieutenant colonel commanding the Eighth London and 23d London regiments, and as general officer, commanding the 174th Infantry Brigade. For his services in the War he was brevetted a brigadier general and received the Distinguished Service Order and the Order of St. Michael and St. George. For four years after 1920 he commanded the Second London Infantry Brigade of the Territorial Army, and from 1923 he was honorary colonel of the London Regiment. After the War he returned to Glyn, Mills, and Co., becoming managing partner in 1923. Two years later he was created a Companion of the Order of the Bath and in 1931, Knight Commander. President of the Institute of Bankers during 1931-32, he held directorates in the Union Bank of Australia, Ltd., the Royal Mail Steam Packet Co., and in several other shipping companies. He helped to reorganize the "Royal Mail Group" of companies.

MAYR, RICHARD. Austrian baritone, died in Vienna, Dec. 1, 1935. Born in Salzburg, in 1877, he studied at the University of Vienna and at the Conservatory. Although he had several earlier opportunities to appear on the stage, he did not make his debut until 1902, when he appeared as Hagen in *Gottterdammerung* at the Bayreuth Festival. Meeting with immediate success, he was made a permanent member of the Hofoper at Vienna, and became known as one of the greatest of Liedersingers of his time. He sang at the Bayreuth Festivals in the summers during 1908-14. In 1924, he made his first appearance in London in *Der Rosenkavalier* and his first New York appearance in *Die Meistersinger* in 1927.

MENDEL, LAFAYETTE BENEDICT, died Dec. 9, 1935.

MENDELSSOHN, FRANZ VON. German banker, died June 13, 1935. Born in Germany, in 1865, he studied law and then entered the banking business. In 1902 he became a partner in his father's firm, Mendelssohn and Co., and in the same year, served as Belgian Consul General in Berlin. He relinquished the latter post in 1913 to become a member of the upper house of the Prussian Diet. Chairman of the Committee of Trustees of the German-Dutch Financial Agreement, he was a member of the Provisional Economic Council from 1922. He was the first president of the German Group of the International Chamber of Commerce and held the same office, up to 1931, in the Berlin Chamber of Commerce and Industry, and of the Commerce and Industry Congress.

MENDENHALL, CHARLES ELWOOD. American physicist, died at Madison, Wis., Aug. 18, 1935. Born in Columbus, O., Aug. 1, 1872, he received the B.S. degree from the Rose Polytechnic Institute in 1894 and the Ph.D. degree from Johns Hopkins University in 1898. During 1894-95 he was an instructor in physics at the University of Pennsylvania and during 1898-1901, at Williams College. Then he joined the faculty of the University of Wisconsin and served successively as assistant professor of physics (1901-03), associate professor (1903-05), and full professor from 1905. His researches pertained to studies on the absolute value of gravity, high temperature measurements, and constants of radiation about which he wrote numerous important papers. A former president of the American Physical Society (1923-25), he was chairman of the division of physical sciences of the National Research Council. Also, he was fellow and former vice president in 1929 of the American Association for the Advancement of Science. He served in the World War as major in the science and

research division of the Signal Corps and Air Service.

MEYER, MAJOR HENRY CODDINGTON. American engineer, died at Montclair, N. J., Mar. 27, 1935. Born in New York City, Apr. 14, 1844, he received a private education. He served in the Civil War, and after being seriously wounded, in June, 1864, was promoted to the rank of major, awarded the Congressional Medal of Honor, and discharged for disability. In 1868 he organized the Henry C. Meyer Co., dealers in plumbing, glass, and steam fixtures, and founded the magazine, the *Sanitary Engineer*, in 1878. Major Meyer retired from business in 1882 to devote his time exclusively to his magazine, which was later named the *Engineering Record*. This periodical was the forerunner of the present *Engineering News-Record*. His interest in sanitary plumbing led to the passage of the Plumbing Laws of 1881. Another of his interests was the heating of railway cars by steam pipes. His *Water Waste Prevention*, published in 1884, did much toward reducing the prejudices frequently met by water-works authorities.

MICHURIN, IVAN VLADIMIROVICH. Soviet botanist, died at Michurinsk, U.S.S.R., June 7, 1935. Born in Pronsky Co., Riazan Province, Russia, in 1860, he attended the Riazan Gymnasium. After serving as a clerk for a time, he removed to Kozlov in 1875, where, eight years later, he bought a piece of land and began his horticultural activities. As a result of his experiments in hybridization and cross breeding, over a hundred new species of fruits and vegetables were obtained. In 1918 his farm came under the control of the People's Commissariat of Agriculture in the Soviet Government and came to the attention of Lenin in 1922 who placed the government's aid at Michurin's disposal. The Michurin Scientific Research Institute was founded in 1931, and he received the Order of the Red Banner, the Order of Lenin, and was given the title, Honored Scientist of the Republic. Also, the town of Kozlov was renamed Michurinsk in his honor.

MIELZNER, LEO. American portrait painter, died at Truro, Mass., Aug. 11, 1935. Born in New York City, Dec. 8, 1869, he received his art education at the Cincinnati Art Academy, Ecole des Beaux Arts, Julian Academy, and the Colarossi Academy in Paris, and studied under Kroyer in Denmark. During 1913-15 he was an instructor at the Art Students' League in New York. His work includes "Portrait of John Bassett Moore," Columbia University, N. Y.; "Portrait of Nathan Abbott"; "Portrait of Harlan Fiske Stone," Columbia University; "Portrait of Solomon Schechter," Jewish Theological Seminary, N. Y.; "Portrait of Moses Mielzner," Hebrew Union College, Cincinnati; "Portrait of Woodrow Wilson," Democratic Club, N. Y.; "Portrait of Elizabeth Milbank Anderson," Barnard College, N. Y. In addition, he is represented in the Metropolitan Art Museum, N. Y., the Boston Art Museum, and the Cincinnati Art Museum.

MILLER, FRANK AUGUSTUS. American art collector, died at Riverside, Calif., June 15, 1935. Born at Tomah, Monroe Co., Wis., June 30, 1857, he removed to California in 1872 and five years later, founded at Riverside, the Glenwood Mission Inn, a beautiful example of mission architecture. He enlarged it from time to time, always using rare artistic taste in building distinctive architectural features of the mission buildings. He gathered art treasures from all parts of the world for the mission, and in 1932, erected the latest addition, a chapel, which he dedicated to St. Francis of Assisi. In 1890 he built and, for 15 years thereafter, managed the Loring Opera House, and in like manner built and managed, also for 15 years after 1898, the Riverside and Arlington Electric Ry. In 1928 the Emperor of Japan decorated him with the Order of the Rising Sun for his efforts toward bettering relations between the United States and Japan.

MILLS, HARRIET MAY. American suffragist and social worker, died May 16, 1935, in Syracuse, N. Y., where she was born Aug. 9, 1857. She was graduated from Cornell University in 1879, and began her association with the New York State Woman Suffrage Association in 1892, taking part in the constitutional campaigns in New York in 1894 and in California in 1895. In the Suffrage Association, she served successively as recording secretary and lecturer (1892-96); organizer and lecturer (1896-1920), vice president (1902), and president (1910-13). In 1920 she was nominated the first woman to run on the Democratic ticket for Secretary of State of New York. Three years later she was appointed State Hospital Commissioner by Governor Alfred E. Smith, and in 1929, became assistant director of the State Democratic Bureau of Publicity and Information at Albany. In the State Democratic organization, she was associate chairman of the Democratic State Committee in 1922, and, at the time of her death, secretary of that Committee. Besides her political activities, Miss Mills organized one of the first Browning study clubs and was keenly interested in sociological work.

MITCHELL, CHARLES STANLEY. American banker, died at High Hill, N. Y., Aug. 13, 1935. Born in Rochester, N. Y., Apr. 20, 1882, he received a common school education and then entered the banking field. His first post was as a runner for the Astor National Bank in New York City. Then he became a teller in the Century Bank of New York and after a series of rapid promotions, was vice president of

the Century when it was united with the Chatham and Phenix. He resigned in 1924 to take the post of president with the Central Mercantile Bank. One year after he took office, the bank's total resources were increased by \$19,400,000. On the merger of the Central Mercantile with the Bank of United States in 1928, Mitchell became chairman of the board of directors. When that institution closed its doors in 1930, Mr. Mitchell ardently condemned the manner in which the affairs of the bank had been managed and, in the court proceedings that followed, all indictments against him were dropped. Mitchell did not resume business activity again until the early part of 1935 when he joined the firm of Tobey and Kirk, brokers.

MITCHELL, LANGDON ELWYN (pen name JOHN PHILIP VARLEY). American playwright, died Oct. 21, 1935, in Philadelphia, where he was born Feb. 17, 1862. After studying abroad for several years, he attended the law schools of Harvard and Columbia universities, and was admitted to the New York bar in 1886. Shortly after establishing a practice, he turned to writing. He is the author of the plays *In the Season*, produced in London in 1893; *Backy Sharp*, a dramatization of *Vanity Fair*, produced in 1899; *A Kentucky Belle*; *Step by Step*; *The New Marriage*; *The New York Idea*, produced in London in 1907; *The Kreutzer Sonata*, from the Yiddish of Jacob Gordon (1907), and *Major Pendennis*. His other publications include *Sylvian and Other Poems* (1884); *Poems* (1894); *Love in the Backwoods* (1896), and *Understanding America* (1927).

MLYNARSKI, EMIL Polish composer, died Apr. 5, 1935. Born at Kibarty in Suwalki, July 18, 1870, he received his musical education at the St. Petersburg conservatory where he studied the violin under Leopold Auer. He joined the orchestra of the Russian Imperial Musical Society at St. Petersburg in 1889, and later became instructor of violin at its Odessa branch. After touring Germany and England during 1890-91 as violin virtuoso, he was appointed conductor at the Warsaw Opera House in 1898. From 1901 to 1905 he conducted the Warsaw Philharmonic concerts and from 1904 to 1907, was director of the Warsaw Conservatory. On removing to London in 1908, he devoted his time to composing. During 1910-15 he was director of the Choral and Orchestral Union in Glasgow, and in 1919, he returned to his former posts in Warsaw as conductor at the opera and director of the Conservatory. He resigned the latter post in 1922. He came to the United States in 1929 to conduct the orchestras of the Curtis Institute and the Philadelphia Grand Opera Co. Also, he was a member of the faculty of the Curtis Institute of Music. He won the Paderewski prize at Leipzig in 1898 for his *Violin Concerto in D minor*. Also, he wrote the opera, *Eine Sommernacht* (Warsaw, 1923), and *Symphony in F*.

MOGYOROSSY, ÁRKÁD (ARCADIUS AVELLANUS). American Latinist, died in New York City, June 16, 1935. Born at Esztergom, Hungary, Feb. 6, 1851, he received his education in his native land and came to the United States in 1878. He settled in Philadelphia where, from 1894, he was editor and publisher of *Præco Latinus* (or *Latin Herald*), a Latin periodical for promoting the adoption of this language in speech. His publications include: *Palestra A Primer for Spoken Latin* (1893); *Arena Palæstræum* (1893); *Robinson Crusoe* (1897); *Medulla* (1898); *The Colloquia of Maturanus Corderius, the Teacher of John Calvin* (1904); *Fabula Tusculana* (1913) translations into Latin of Ruskin's *King of the Golden River* (1913), and *The Adventures of Captain Mago* (1914).

MOISSI, ALEXANDER, died Mar. 22, 1935. MONTAGUE, FRANCIS CHARLES. English historian, died at Oxford, Apr. 8, 1935. Born in London, Aug. 31, 1858, he received his education at University College, London, and Balliol College, Oxford. He was called to the bar in 1884 but in 1893 became professor of history at University College, London, and held office until his retirement as professor emeritus in 1928. Curator of the Indian Institute at Oxford during 1900-13, he was lecturer in modern history at Oriel College there from 1897 to 1923. His publications include *Limits of Individual Liberty* (1885); *Technical Education* (1887); *Life of Sir Robert Peel* (1888), and *Elements of English Constitutional History* (1894). Also, he contributed to the *Cambridge Modern History* (vol. viii, 1904) and Longman's *Political History of England* (vol. vii, "James I to Restoration," 1907), and edited Bentham's *Fragment on Government* (1891) and Macaulay's *Essays* (1903).

MOORE, FLORENCE. American musical comedy actress, died at Darby, Pa., Mar. 23, 1935. She was born in Philadelphia about 1887 and made her first appearance with her brother's stock company. She was married to Billy Montgomery in 1906, and together they formed one of the best known teams in vaudeville. Following her first Broadway appearance in New York City in *Hanky-Panky* in 1912, she subsequently played in *The Passing Show of 1916*; *Parlor, Bedroom and Bath*, which was her greatest success; *The Music Box Revue*; *The Greenwich Village Follies*; *Artists and Models*, and *The International Revue*.

MORGAN, JOHN LIVINGSTON RUTGERS. American chemist, died in New York City, Apr. 13, 1935. Born in New Brunswick, N. J., June 27, 1872, he received the B.S.

degree from Rutgers University in 1892, and the Ph.D. degree from the University of Leipzig in 1895. The next year he was an assistant in chemistry at Stevens Institute and in 1896, instructor in quantitative analysis at the Brooklyn Polytechnic Institute. He joined the faculty of Columbia University, and served successively as tutor in physical chemistry and chemical philosophy (1897-1901); adjunct professor of physical chemistry (1901-05), and professor from 1905. A fellow of the Chemical Society of London and of the American Association for the Advancement of Science, he wrote *The Theory of Solution and Its Results* (1897); *The Elements of Physical Chemistry* (1899, 5th ed., 1914); *Physical Chemistry for Electrical Engineers* (1906, 2d ed., 1909), and translated from the German of G. Helm *The Theory of Solution and Its Results* (1897).

MORRIS, EDWARD PATRICK, FIRST BARON, died Oct. 24, 1935.

MOSER, CHRISTOPHER OTTO. American agriculturist, died at Silver Springs, Md., July 11, 1935. Born in Dallas, Tex., May 29, 1885, he received the B.S. degree from the Texas Agricultural and Mechanical College in 1904, and served as State feed inspector for that institution the following year. He was a dairy expert with the U.S. Department of Agriculture at Washington, D. C., in 1907 and in the following year returned to the Texas Agricultural College as instructor in animal husbandry. In 1908 he organized the Moser Hygienic Dairy Co. of Dallas in which he served as president and general manager until 1912. In like manner he organized and managed the Coons-Moser Silo Co. (1910-15); North Texas Creamery Co. (1912-15), and the Moser Construction Co. (1910-15). He organized the American Cotton Growers Exchange in 1921 and served as secretary-manager (1921-25), and president and general manager (1925-30). From 1930 he was vice president and secretary of the American Cotton Cooperatives Association and vice president and secretary of the Cotton Stabilization Corp. Also he was president of the National Cooperative Council (1929-33); chairman of the American Institute of Cooperation (1929), and a member of the Texas Farm Bureau Federation (1919). Moser was a leading figure in the organization of the National Chamber of Agricultural Cooperatives, formed under the Hoover farm relief plan.

MULHOLLAND, WILLIAM. American hydraulic engineer, died in Los Angeles, Calif., July 22, 1935. Born in Belfast, Ireland, Sept. 11, 1855, he received his education at the Christian Brothers School in Dublin and came to the United States as a young man. Settling in California, he became a member of the Los Angeles Bureau of Water Works and Supply and from 1886, was superintendent and chief engineer of the Bureau. Also, he was chief engineer of the Department of Public Service in Los Angeles. He was best known for his work on the Los Angeles Aqueduct, the 250-mile water way which was constructed at a cost of \$24,500,000. Mulholland devised plans and estimates for this project and superintended the entire construction of it.

MURLIN, LEMUEL HERRERT. American clergyman and educator, died at Wayland, Mich., June 20, 1935. Born in Mercer Co., O., Nov. 16, 1861, he attended De Pauw University, graduating from its School of Theology in 1892 and from the Garrett Biblical Institute in 1899. He taught at Ft. Wayne College during 1877-86, entering the ministry in the latter year and becoming rector of Trinity Church at Ft. Wayne, Ind. He subsequently held various pastorates and returned to De Pauw University as instructor during 1891-92. From 1894 to 1911 he was president of Baker University, Baldwin, Kan., of Boston (Mass.) University (1911-25), and of De Pauw University (1925-28). He was a member of General Conferences of the Methodist Episcopal Church between 1900-1924, attending like conferences in London and Toronto.

MURPHY, CHARLES. Canadian senator, died Nov. 24, 1935, in Ottawa, where he was born, Dec. 8, 1863. He received the A.B. degree from the University of Ottawa, and after his call to the Ontario bar in 1891, he became associated with the law firm of Latchford and Murphy. From 1895 to 1902 he practiced alone, and in the latter year, joined the firm of Fisher and Murphy with which he was connected until 1910. In 1908 he was named a member of the Privy Council and in the same year, was elected to the House of Commons to represent County Russell. He was reelected in 1911 and 1917. From 1908 to 1911 he was Secretary of State, and in 1921, was appointed Postmaster General in the cabinet of Mackenzie King. He resigned from that post in 1926. In September, 1925, he was summoned to the Senate.

NAVIN, FRANK J. American lawyer and baseball club owner, died in Detroit, Mich., Nov. 13, 1935. Born in Adrian, Mich., Apr. 18, 1871, he graduated from the Detroit College of Law in 1897. In 1903 he interested Thomas H. Yawkey in baseball and persuaded him to buy the Detroit franchise in the newly formed American League. By 1907, Mr. Navin had obtained controlling interest in the Detroit Tigers and became its president. During his presidency the club won five American League pennants (1907-09, 1934, 1935) and in the last mentioned year the team won the World's Championship for the first time, defeating the Chicago Cubs. From 1919 he was a vice presi-

dent of the American League and for a short time in 1927 was acting president. The baseball park of the Tigers in Detroit was named for him.

NIENHAUS, CHARLES HENRY, died June 19, 1935.

NIEMAN, LUCIUS W. American newspaper publisher, died in Milwaukee, Wis., Oct. 1, 1935. Born in Bear Valley, Sauk Co., Wis., Dec. 13, 1857, he received a public school education and learned to set type. Subsequently he studied at Carroll College, and before he was 21 was reporter, editor, and managing editor of the Milwaukee *Sentinel*. In about the year 1878 he was invited to build up the *St. Paul Dispatch* and for about a year served as its managing editor. He returned to the *Sentinel*, and in 1882 the merger of Milwaukee's two papers opened a new field. Mr. Nieman acquired the Milwaukee *Journal* and by its fearless discussion of State and national affairs, its reputation as a powerful journal was early established, and it became one of the leading independent newspapers of the Northwest. In 1919, the *Journal* was awarded the Pulitzer Medal for "the most disinterested and meritorious service rendered by an American newspaper in 1918." Mr. Nieman relinquished active control of the paper about 1925.

NILES, WILLIAM WHITE American lawyer, died in Riverdale, N. Y., Jan. 12, 1935. Born at Waterford, N. Y., July 22, 1860, he graduated from Dartmouth College in 1883, and received his law degree from the Albany (N. Y.) Law School in 1886. In that year he was admitted to the New York bar and began the practice of law. He served one year in the New York Assembly (1895), and five years later served as counsel for the sub-committee on borough government of the New York City Charter Revision Commission, and drafted the chapter on borough government. Subsequently, he was a member of the Ives New York City Charter Commission and drafted the chapters on education, charities, and correction. In 1907, Mr. Niles conceived the idea of the Bronx River Parkway and drafted the law creating the Bronx River Parkway Commission, on which he served as vice president until 1925 when the Parkway was opened and the Commission disbanded. Appointed a member of the Taconic State Park Commission in 1927 he was elected chairman in 1930. From 1895 he served as a member of the board of governors of the New York Zoological Society, and was the secretary in 1926. The New York Society of Arts and Sciences awarded him its gold medal for his work on the Bronx River Parkway Commission.

NOETHER, EMMY German mathematician, died in Bryn Mawr, Pa., Apr. 14, 1935. Born in Erlangen, Germany, Mar. 23, 1882, she was educated at the University of Erlangen, and after receiving the degree of Ph.D., became an instructor in mathematics at the University of Göttingen. She remained at the University until 1933 when the "non-Aryan" campaigns of the Nazi Government brought her to America. She was invited to become associated with the department of mathematics at Bryn Mawr, and also lectured at the Institute of Advanced Study at Princeton University. Miss Noether was considered one of the world's ablest mathematicians, who made startling changes in algebra and revolutionized the style of thinking in that branch of science. After her death, the Emmy Noether Memorial Fund was established at Bryn Mawr for advanced work in mathematics.

NOONAN, TOM American evangelist, died in Brooklyn, N. Y., July 25, 1935. Born in New York City in 1878, he was a criminal at 16, and while imprisoned at Dannemora, N. Y., was impressed by a visiting preacher's words. After his release, he visited Mrs. Maud Ballington Booth in October, 1896, who found him work at Hope Hill, a country home for ex-convicts. In 1904 he went to Doyers Street, New York City, to take over the work of the Rescue Society, which had been established in 1893. For 32 years he labored there among the friendless and homeless and made the work of the Mission known throughout the country. He began to broadcast the mission service on Sunday afternoons in 1925, and after an interruption, the programme was resumed in 1929, with amazing success, and thousands of persons became interested in Tom Noonan and his work. In February, 1930, he conducted a revival meeting in Queens, New York. His work earned for him the title of "Bishop of Chinatown."

NORRIS, CHARLES American physician, died in New York City, Sept. 11, 1935. Born in Hoboken, N. J., Dec. 4, 1867, he was educated at the Sheffield Scientific School (1888) and at the College of Physicians and Surgeons (1892); also, studying abroad from 1894 to 1896. In the latter year he returned to the United States and became an instructor in pathology at Bellevue Hospital, New York City, which he held until 1904 when he received the appointment of director of the laboratory at Bellevue and Allied Hospitals. In 1918 he was made Chief Medical Examiner for New York City by Mayor John F. Hylan, his position being created as successor to the Board of Coroners. As chief medical examiner of the city of New York, he passed upon all the sudden deaths in the City, and after extensive research became an authority on wood alcohol, tetra ethyl lead, and carbon monoxide poisoning. At various times he taught in Cornell, Fordham, and New York

universities, and in 1934 received the gold medal of the New York Academy of Medicine.

NORTH, FRANK MASON American Methodist clergyman, died in Madison, N. J., Dec. 17, 1935. Born in New York City, Dec. 3, 1850, he graduated from Wesleyan College in 1872, and was ordained in the Methodist ministry in the following year. He held various pastorates, and was stationed in New York City from 1884 to 1887, when Calvary Methodist Episcopal Church was erected. In 1892, he became corresponding secretary of the New York City Church Extension and Missionary Society, and in the same year took over the editorship of *The Christian City*. Two years later he became corresponding secretary of the National City Evangelical Union of the Methodist Episcopal Church. He relinquished these three positions in 1912 to become corresponding secretary of the Board of Foreign Missions of the Methodist Episcopal Church, becoming secretary to the Council in 1924, and secretary emeritus in 1928. From 1912 to 1916 he was chairman of the executive committee of the Federal Council of the Churches of Christ in America, and president of the Council from 1916 to 1920. During his presidency he supervised reconstruction work in France and Belgium, and for his services was made a Chevalier of the Legion of Honor (1919), and Officer of Public Instruction, France (1920). Dr. North was the author of many hymns.

NORTHRUP, WILLIAM PERRY American pediatrician, died in New York City, Nov. 20, 1935. Born in Peterboro, N. Y., Jan. 11, 1851, he was graduated from Hamilton College in 1872, and taught Greek at Knox College, Illinois, from 1872 to 1876, when he left to take up the study of medicine. He graduated from the College of Physicians and Surgeons, New York, in 1878, and in 1893 became adjunct professor of pediatrics in University and Bellevue Hospital Medical College (New York University), three years later becoming a full professor, and after 1919, professor emeritus. Dr. Northrup was one of the first practicing pediatricians in New York City, and from 1919 was attending physician to the Presbyterian Hospital and consulting professor of its pediatric service. It was at this hospital that he introduced the first open-air hospital ward. He was also consulting physician to various hospitals throughout the city. In 1926 he retired from private practice. Besides contributing to medical journals on the open-air treatment of pneumonia, he was American editor for Ashley & Wright's *Diseases of Children* (1900), and of Nothnagel's *Encyclopedia of Practical Medicine*, Amer. ed., vol. iv (1902). He contributed the article on diphtheria to this last-named work.

OBRECHT, EDMOND M. Roman Catholic clergyman, died at Gethsemane, Ky., Jan. 4, 1935. Born in Stotzheim in the department of Bas Rhin, France, Nov. 13, 1852, he was educated at the Seminary of Strassburg. After service in the Franco-Prussian War, he entered the Seminary at Séz in Normandy and later studied at the Sorbonne, Paris. He entered the Trappist order in 1874 and was ordained priest in 1879. During the first year of his priesthood he was made vice procurator general of the Order. His first assignment in the United States was to New York, and in 1898 he was appointed Superior of the Abbey at Gethsemane, being elected Abbot by the members of the community in accordance with the rules of the Order. In 1904 he was appointed visitor and administrator of the Mariannhill Monastery in South Africa, which he visited annually until 1908. Also, he held that office for Palestine, China, and Japan. He was appointed special visitor and superior administrator of all the Trappist monasteries in the United States and Canada in 1925. The double anniversary of his 50 years in the priesthood and the 25th year of his rule of the Abbey was celebrated in 1924, and Pope Pius XI conferred the purple zucchetto, worn by Bishops of the Church, upon him.

OCHS, ADOLPH S (IMON), died Apr. 8, 1935.

O'CONNOR, THOMAS V (ENTRY) American labor leader, died in Buffalo, N. Y., Oct. 17, 1935. Born in Toronto in 1870, his parents moved to Buffalo in 1872, and after attending the public schools he obtained work upon the docks. He rose to be a master engineer and master, and his early interest in labor led to his election as president of the Licensed Tugmen's Association of the Great Lakes in 1906. Two years later he was elected president of the International Longshoremen's Association, and during his term made every effort to avoid strikes, particularly in 1919. He resigned in 1921 to become vice chairman of the United States Shipping Board. He succeeded to the chairmanship in 1924, was reappointed in 1926, and retired in 1933. Mr. O'Connor played an important part in shaping the policy of the American merchant marine, and was an advocate of the Jones-White Act of 1928. He was a member of the New York State Industrial Board in 1921, and of the advisory council of Lincoln Memorial University, from which he received the degree of LL.D.

OLDER, FREMONT, died Mar. 3, 1935.

OLSON, HARRY American jurist, died in Oak Park, Ill., Aug. 1, 1935. Born in Chicago, Aug. 4, 1867, he attended Washburn College, Kansas (1887-88), graduated from the Union College Law School in Chicago, and was admitted to the Illinois bar in 1891. From 1896 to 1906 he

served as assistant State Attorney for Cook Co., and then was appointed chief justice of the newly created Municipal Court of Chicago. He held this office until his defeat in 1930 when he retired to private practice. Judge Olson was considered responsible for the development of the Municipal Court, which was a revolution in Chicago's municipal system. In 1913 he established a psychopathic laboratory in connection with the Court, and with Dr William J. Hickson, its head, instituted a series of character tests, similar to intelligence tests. It was the Judge's belief that criminals had an incurable defect in the brain that was largely hereditary, and that by eugenics, the criminal population of the country could be wiped out. In the Republican primaries for Mayor in 1921 he was unsuccessful, and in 1925 served as a member of a committee of the American Law Institute which was to draft a model code of criminal procedure for recommendation to State legislatures throughout the country.

OSBORN, HENRY FAIRFIELD, died Nov. 6, 1935.

OWRE, ALFRED, died Jan. 2, 1935.

PACELLI, MARQUIS FRANCESCO. Vatican statesman, died in Vatican City, Apr. 22, 1935. Born in Italy in 1874, a brother of Eugenio, Cardinal Pacelli, Papal Secretary of State, he first came into prominence with the settlement of the Lateran Treaty creating the State of Vatican City in 1929. Signor Pacelli acted as a secret mediator between Pope Pius XI and Premier Benito Mussolini, and for over two years carried proposals and counter-proposals between the two principals. The Pope made him a Marquis for his services in this important matter. In 1926 he attended the 28th Eucharistic Congress at Chicago.

PAGET, VIOLET (pseudonym, "Vernon Lee"). English author, died in Florence, Italy, Feb. 13, 1935. Born in 1856, she settled in Italy in 1871, and at the early age of 24 published what was one of the first excursions into the little known 18th century—*Studies of the Eighteenth Century in England*. This was followed by various works, including *Euphonia*, essays on Renaissance (1884); *Renaissance Fancies and Studies* (1895); *The Spirit of Rome* (1905); *Gospels of Anarchy* (1908); *Laurus Nobilis* (1909); *The Tower of Mirrors* (1914); *Louis Norbert* (1914); *Satan the Waster* (1920); *The Golden Keys* (1925). Her latest work, *Music and Its Lovers* (1932), was considered one of the most complete of its kind. In 1924, Durham University made her Honorary Doctor of Letters.

PALLIS, ALEXANDER. A modern Greek scholar, died at Liverpool, Eng., Mar. 18, 1935. Born in Piræus, Greece, in 1851, he was educated at the Gymnasium and University of Athens, and for many years was associated with the firm of Ralli Brothers of Athens and Liverpool. In 1898 he became a naturalized British subject. Mr. Pallis first came into prominence with the publication of a modern popular version of the Gospel of St. Matthew in the *Akropolis*, an Athenian newspaper, which caused riots in the city, and led the Synod to prohibit all modern versions of the Greek Testament in Greece. He had long advocated the use of popular speech in literature in opposition to the affected literary language of his time. Other of his writings in Greek were: *The Four Gospels* (1902); *The Iliad* (1904); Euripedes' *Cyclops* (1906); translations of *The Merchant of Venice* and *Henry IV*; Sophocles' *Antigone*, and Kant's *Critique* (1904), and a collection of his own poetry (1907). His first publication in English was *A Few Notes on the Gospel According to St. Mark and St. Matthew* (1903), which was followed by part of the Iliad, an annotated edition of St. Paul's Sermon to the Romans, notes on St. John and the Apocalypse; notes on St. Luke and the Acts; a paper on Fascism, and a commentary on the seventh book of Thucydides.

PARKER, WALTER HENRY. British sea captain, died at Woking, Surrey, Nov. 7, 1935. Born in 1869, at an early age he was an apprentice on a sailing vessel, and rose through the grades to the command of a ship. In 1894, Parker joined the Royal Mail Steam Packet Co. and from 1906 commanded various of the line's boats. During the Boxer Rebellion, he served as acting lieutenant on H.M.S. *Hermione*, and in 1901 received the China Medal. During the World War, from 1915 to 1917, he commanded H.M.S. *Medusa* on patrol in northern waters, and subsequently acted as Commodore of the North Atlantic Convoys, being mentioned in both American and British dispatches for his success in running the German submarine blockade. In 1919 he was made a Commander of the British Empire. He returned to the merchant marine in 1920, and when the R.M.S.P. Co. acquired the White Star Line in 1927, he was given command of the *Homeric*, and in the following year of the *Olympic*. He retired in 1929. Subsequently he served as Nautical Assessor to the Court of Appeal and Home Office. Besides various works on nautical subjects, he wrote a biography, *Leaves from an Unwritten Logbook* (1931).

PARSONS, H(ARRY) DE B(ERKELEY). American consulting engineer, died in New York City, Jan. 26, 1935. Born in that city on Jan. 6, 1862, he graduated from Columbia University in 1882, and from Stevens Institute of Technology in 1884. In the following year he entered upon the practice of his profession, and six years later became professor of steam engineering at Rensselaer Polytechnic Institute in Troy, N. Y., retiring in 1907 as professor

emeritus. Mr. Parsons was consulting engineer for many projects, and served as a member of the New York State Voting Machine Commission (1898-1914); as chairman of the Commission of Street Cleaning and Waste Disposal of New York City (1906-07); with the Metropolitan Sewerage Commission (1908-14), and as consulting engineer for the New York City Board of Estimate in connection with the Catskill water supply (1909-11). During the World War he was in the district appraisal office at the Detroit Bureau of Aircraft Production. A member of various engineering societies, in 1925 he was awarded the Thomas Fitch Rowland Prize and in 1930 the Croes Medal. Besides contributing papers to technical publications, he wrote *Steam Boilers: Their Theory and Design* (5th ed., 1917); *Disposal of Municipal Refuse* (1906), and *Tidal Phenomena of the Harbor of New York*.

PAYNE, JOHN BARTON, died Jan. 24, 1935.

PEARSON, ALFRED CHILTON, died Jan. 2, 1935.

PECK, ANNIE S., died July 18, 1935.

PHOTIUS II MANIATES. Ecumenical Patriarch and Archbishop of Constantinople and New Rome, died at Istanbul, Turkey, Dec. 29, 1935. Born at Prinkipi in 1874, he was educated at a Greek school in Philippopolis, Bulgaria, and subsequently studied at the universities of Athens, Munich, and Lausanne. He entered the ministry of the Greek Church in 1902, became vicar of Philippopolis, and in 1906, upon the expulsion of the Greek Bishops, he was given charge of all the Greek communicants in Bulgaria. After 1914 he went to Constantinople, and in 1919 became head of the Pera community, holding the title of Bishop of Eirenopolis. Five years later he was promoted to Metropolitan of Philadelphia, and in the following year translated to Derkos, and on the death of Basil III Georgiades in 1929 was elected his successor. As such, he held leadership over five sees in Turkey, four in Italian Dodecanese, one in Prague, one in Sydney, one in New York City, and others in Finland and Estonia. From 1933, Photius' temporal power had been seriously curtailed by the edict of the Turkish Government laicizing schools and hospitals.

PILSUDSKI, JOSEF CLEMENS, died May 12, 1935.

PIRENNE, HENRI. Belgian historian, died at Brussels, Oct. 24, 1935. Born in Verviers, Dec. 23, 1862, he was educated at the universities of Liège, Paris, Leipzig, and Berlin. He began his career as a lecturer in mediæval history at Liège, in 1885, and in the following year was appointed to the chair of history at the University of Ghent from which he was retired as professor emeritus in 1930. An ardent patriot, he was interned in a German prison camp during the World War. Dr Pirenne was honored by many universities and learned societies throughout Europe, and in 1922 delivered a course of lectures on "The Origin of Cities in Western Europe" at Princeton University. In the following year he served as president of the 5th International Congress of Historic Sciences held at Brussels. His more important publications include: *Histoire de Belgique* (7 vols., 1900-32, in many editions); *Recueil de documents relatifs à l'histoire de l'industrie drapière en Flandre*, with G. Espinas (4 vols., 1906-24); *Les Étapes de l'histoire sociale du Capitalisme* (1914); *Souvenirs de captivité en Allemagne* (1920); *La Belgique et la guerre mondiale* (1929); *Bibliographie de l'histoire de Belgique*, with H. Nowe and H. Obreen (3d ed., 1931).

PONTING, HERBERT GEORGE. British explorer and photographer, died in London, Feb. 7, 1935. Born about 1871, he was educated at Wellington House College, Leyland. He went to California in 1900 and in the following year was a war correspondent for *Leslie's Weekly*, New York, with the American army in the Philippines. Also he served as a correspondent for *Harper's Weekly* with the first Japanese Army in Manchuria during the War with Russia, for which he received the Japanese Medal. His interest was early attracted by photography, and in 1909 he exhibited his photographs at the Japan-British Exhibition, and in the same year won the highest award at the Dresden International Photographic Exhibition. In the following year he was appointed photographer with Scott's last South Pole Expedition, serving until 1913. Upon his return he exhibited photographs of the Antarctic at the Fine Arts Gallery, London, and for many years lectured upon the subject of the Expedition. In 1933 he completed a motion picture record of the Expedition, which he synchronized with his own lecture upon the subject. He received the King George V Polar Medal and the Royal Geographic Medal for Antarctic Exploration. In 1918 he served as a member of the Spitsbergen Expedition. A contributor to both American and British periodicals, he was the author of *Fujisan* (1905); *Japanese Studies* (1906); *In Lotus-Land: Japan* (1910); *The Great White South* (1921).

POROVICS, ALEXANDER. Hungarian banker, died in Budapest, Apr. 15, 1935. Born in 1862, he was educated at Budapest University, and began his financial career in the office of the Hungarian Minister of Finance in 1882. He was Under Secretary of State in 1903, and three years later became a Deputy. In the second cabinet of Dr. Wekerle (1906-09) he served as a financial adviser, becoming a Privy Councillor in 1908. In the following year he was made Governor of the Austro-Hungarian Bank. In 1918 he again entered the political arena and served as Minister of Finance in Wekerle's third cabinet, but retired

after the Armistice. He was financial member of the Hungarian Peace delegation in 1920, and in 1921 served as president of the Provisional State Institute for the Issue of Currency Notes. With the aid of the League of Nations, the Hungarian National Bank was formed in 1924, and Popovics was appointed its president. He served thus until January, 1935, when ill health caused his retirement. From 1926 he was *ex officio* member of the Upper House and Chairman of the Financial Committee. He was the author of *Austro-Hungarian Finance During the War*, which was published in 1925 as one of the Carnegie Endowment Series.

POST, WILEY, died Aug. 15, 1935.

POUND, CUTHBERT WINFRED, died Feb. 3, 1935.

POWERS, (ARBA) EUGENE. American actor, died at Saranac Lake, N. Y., Jan. 7, 1935. Born at Houlton, Me., May 21, 1872, he attended Ricker Classical Institute in Augusta. In 1891, he made his debut at Boothbay Harbor, Me., in *British Born*. After playing in stock for seven years, he made his first New York appearance as Silas Toner in *The Village Postmaster* at the Fourteenth Street Theatre in 1898. He again spent years in stock and on tour, but after 1913, when he played Long Rogers in *The Painted Woman*, he scarcely spent a season without a rôle. In 1920, he appeared with Margaret Anglin in *The Woman of Bronze*, and his last engagement was as Admiral Battersby in *Red Planet* in 1932. Among those rôles which he considered his favorites were Mr. Lingley in *Outward Bound*, Sir Maurice Harpenden in *The Green Hat*, and Alexander Serebrakoff in *Uncle Vanya*, which he played in 1930. One of his last appearances was as Pandarus in the Players' Club revival of *Troilus and Cressida* in 1932, in which he surprised his admirers by his humorous characterization of the rôle, being usually cast in a more serious type.

PRATT, GEORGE DUPONT. American conservationist and philanthropist, died at Glen Cove, L. I., Jan. 20, 1935. Born in Brooklyn, N. Y., Aug. 16, 1869, he was graduated from Amherst College in 1893, when he obtained a position as a shop hand with the Long Island Railroad, later becoming assistant to the president, and from 1895 to 1900, superintendent of its ferries. In 1900 he became treasurer of the Chelsea Fibre Mills, and subsequently joined the firm of Charles Pratt & Co., which managed the estate of his father. Deeply interested in the subject of conservation, he was State Conservation Commissioner of New York from 1915 to 1922, and under his administration a comprehensive programme for improvements was inaugurated. For 10 years (1924-34) he was president of the American Forestry Association and endowed its work with \$100,000. A founder of the Boy Scouts of America, he was its treasurer from 1910, and in 1931 established the Daniel Carter Beard Medal for Boys of Kentucky. Also, he was a founder of the American Society of Medalists, vice president of Pratt Institute, Brooklyn, and a trustee of Amherst College, the Metropolitan Museum of Art, and the American Museum of Natural History.

PRYLOOKE, JAAKOFF. British author, died at Hastings, Sussex, Eng., Oct. 24, 1935. Born in Pinsk, Russia, in 1860, he was educated at the Rabbinical Seminaries at Slonim and Meer and at the Government College for Preceptors, Zhitomir. He founded the New Israel Movement at Odessa in 1881, and in the following year was pronounced a heretic by an official Jewish Assembly. He retained the leadership of this group until he emigrated to England in 1891. He then devoted considerable time to lecturing on Russia and woman suffrage in various countries, and in 1895 founded the Russian Reformation Society in London. Also, he was the founder and editor of the *Anglo-Russian Monthly* (1897-1914); founder of Russo-Scandinavian Press (1900); vice president, Anglo-Ottoman Society (1912); founder of French organization, (1913). In 1909 he became a naturalized British subject, and thereafter served as a delegate to various international congresses on peace and suffrage. A contributor to many periodicals, he wrote extensively in Russian, French, German, and English, his chief works in the last-named tongue being *Under the Czar and Queen Victoria*; *My Lady Bolshevik*, and *Some Timely Sex Philosophy in a Nutshell*.

PROKHANOFF, IVAN S. Russian evangelist, died in Berlin, Germany, Oct. 6, 1935. Born in Vladikavkaz, Russia, Apr. 17, 1869, he was educated as an engineer in Russia, Germany, France, and England. About 1900 he established the All-Russian Evangelical Christian Union, said to be the largest evangelical organization in Russia. Twice Dr. Prokhanoff was imprisoned by the Bolsheviks, and in 1928 left the country for good. From then on he spent most of his time travelling and collecting funds for the needy Christians in Russia. A prolific writer, he published, while in Russia, the periodicals *The Christian* and *The Morning Star*, and in New York, *The Gospel in Russia* (1927) and *The Faith of the Gospel* (1931). His autobiography, *In the Cauldron of Russia*, appeared in 1933.

PUPIN, MICHAEL IDOVSKY, died Mar. 12, 1935.

RABINOWITZ-KEMPNER, LYDIA. German bacteriologist, died in Berlin, Aug. 3, 1935. Born in Kovno, Russia, Aug. 22, 1871, she received the degree of Ph.D. from Berne University in 1894, and then joined the Institute for Infectious Diseases, where she studied under Robert Koch,

discoverer of the tubercle bacillus. Under his direction, she engaged in researches concerning the influence of heat on bacteria and pathogenic yeast specimens. She lectured in bacteriology at the Woman's Medical College of the University of Pennsylvania for three winters, beginning in 1896. Two years later she was married to Dr. Walter Kempner. In 1912 she was made a Prussian professor, one of the few German women to attain that rank. Upon the death of Koch, she joined the staff of the University Pathological Institute, remaining until 1920, when she was appointed director of the bacteriological department in the Municipal Hospital in the Moabit district of Berlin. She held this position until the advent of the Nazi Government. Besides contributing to scientific journals and editing *The Tuberculosis Review*, she wrote *The Presence of Tubercle Bacilli in Butter and Milk*; *The Infection of Milk of Tubercular Cows*; *Serum Reaction in the Tuberculosis of Humans and Cattle*; and, with Max Koch, a monograph on *Avian Tuberculosis*.

RANSOME, FREDERICK L (ESLIE). American geologist, died at Pasadena, Calif., Oct. 6, 1935. Born in Greenwich, England, Dec. 2, 1868, he graduated from the University of California and from 1893 to 1895 served there as a Fellow and teacher of mineralogy. He obtained his doctor's degree in 1896. After a year of teaching at Harvard University, he joined the United States Geological Survey as assistant geologist (1897-1900) and geologist (1900-23), being in charge of the sections of western areal geology (1912-16) and metalliferous deposits (1912-23). During this period of his career he also lectured on ore deposits at the University of Chicago (1907) and was Silliman lecturer at Yale (1913). In 1923 he returned to the educational world as professor of economic geology at the University of Arizona, and during his last year there he was Dean of the Graduate College. He joined the staff of the California Institute of Technology as professor of economic geology in 1927, and from 1928 also acted as consulting geologist to the U. S. Bureau of Reclamation and the Metropolitan Water District of Southern California. A member of many scientific societies, he was treasurer of the National Academy of Science (1919-24), and besides writing official monographs on geological subjects, was associate editor of *Economic Geology* and *American Journal of Science*.

RAYNOR, MORTIMER WILLIAMS. American psychiatrist, died in White Plains, N. Y., Oct. 5, 1935. Born in Syracuse, N. Y., June 20, 1879, he took his M.D. at Syracuse University in 1904. After serving his internship, he entered the service of New York State as assistant physician at the Hudson River State Hospital at Poughkeepsie (1907-17), subsequently becoming director of clinical psychiatry, Manhattan State Hospital (1917-23); assistant physician there (1923-24), and medical superintendent, King's Park State Hospital (1924-26). Also, he served as consulting psychiatrist and neurologist at various hospitals throughout the State. In February, 1917, he was appointed psychiatrist of the New York Department of Correction, the first to hold that position, but left to enter the Medical Corps. Among other offices Dr. Raynor held were those of assistant professor of psychiatry at the College of Physicians and Surgeons, Columbia University (1922-28) and professor of clinical psychiatry at the medical college of Cornell University from 1928. He left the service of the State in 1926 to become medical director of Bloomingdale Hospital, White Plains. He was especially interested in the parole system, social work, and medical service in State hospitals and prisons.

RAZZA, LUIGI. Italian public official, died in an airplane accident en route to Eritrea, Aug. 7, 1935. He was born at Vido Valentia, Dec. 12, 1892. After the World War he became a member of the Fascist organization. He joined the staff of *Popolo d'Italia*, Benito Mussolini's journal, in 1919 and subsequently became its editor, later editing *Liberta* in Trento. He took part in the Fascist march on Rome in 1922, and rose to general secretary of the Fascist Corporations in 1925. Later he was elected president of the National Confederation of Fascist Agricultural Syndicates; and was appointed High Commissioner for Migration and Colonization; and chairman of the Cyrene Colonization Corporation, as well as a member of the Fascist Council. Appointed Minister of Public Works Jan. 24, 1935, it was while on a mission to Africa in connection with this office that he met his death. He wrote *Aspetti e vicende del Sindacalismo* (1928); *La Confederazione Italiana dei Sindacati Fascisti de l'Agricoltura* (1929); *L'Organizzazione Scientifica del Lavoro Agricolo in Italia* (1929); *Problemi e Realizzazioni del Lavoro dell'Italia Rurale* (1930); *Le Migrazioni Interne in Italia nell'Anno* (1930); *Migrazioni e Colonizzazioni* (1932); *Le Migrazioni interne in Italia* (1932).

READING, RUFUS DANIEL ISAACS, FIRST MARQUIS OF, died Dec. 30, 1935.

REDWOOD, THE MOST REV. FRANCIS MARY. Roman Catholic prelate, died in Wellington, New Zealand, Jan. 3, 1935. Born in Staffordshire, England, Apr. 8, 1839, he was taken to New Zealand by his parents in 1842. On Dec. 8, 1854, he left for France to begin his studies for the priesthood in the Society of Mary (Marianists). He first attended St. Mary's College at St. Chamond, and then studied at Montbel near Toulon. Subsequently he taught at the

Marist College at Dundalk, Ireland, for a year and in 1864 made his religious profession and was ordained at Maynooth (1865). For several years he taught philosophy and theology in Ireland, but in 1874 was consecrated Bishop of Wellington. Returning to New Zealand, he framed the *Synodal Laws*, and became, as he says in his *Reminiscences* (1922) "so to speak, the founder of practical Canon Law in New Zealand." In 1885 he founded St. Patrick's College, and two years later was made the first Archbishop and Metropolitan of New Zealand. He attended the Eucharistic Congress at Chicago in 1926.

REED, SYLVANUS ALBERT. American inventor, died in New York City, Oct. 1, 1935. Born in Albany, Apr. 8, 1854, he was educated at Columbia, and received the doctor's degree in 1879. Then for a while he engaged in mining work in the West, but in 1885 entered the business world and became associated with various fire-insurance firms. Ten years later he founded the Fire Insurance Tariff Association. Becoming interested in aviation, he believed that thin metal propellers would be more effective than the thick wooden ones in use, and in 1915 began experiments to prove this. Successful tests were made in 1921 and the Curtiss Company bought his patents and began the manufacture of the new propeller. The Collier Trophy of the National Aeronautical Association was awarded to him in 1925 for "the greatest invention in aviation in America the value of which has been demonstrated by actual use," and in 1929 Columbia University conferred upon him the honorary degree of D.Sc. A trustee of the Institute of Aeronautical Sciences, Dr. Reed announced in December, 1934, the foundation of the Reed Award for aviation progress.

REESE, LIZETTE WOODWORTH. American poetess, died in Baltimore, Md., Dec. 17, 1935. Born in Baltimore County, Jan. 9, 1856, she was educated privately and at the age of 17 became a teacher. From 1901 to 1921 she taught English in the Western High School of Baltimore. Her first volume of poetry, *A Branch of May*, appeared in 1887, and thereafter, until 1909, various volumes came from her pen. Her best known poem, "Tears," appeared in *Scribner's Magazine* in 1899. Then she produced nothing until 1920, when *Spicewood* appeared, which was followed by *Wild Cherry* (1923); *Selected Poems* (1926); *Little Henrietta* (1927); *A Victorian Village*, prose autobiography (1929); *White April* (1930); *The York Road*, autobiography (1931), and *Pastures* (1933). In 1931 she received the degree of Litt D., from Goucher College, and the Mary L. Keats Memorial Prize. Her work has been likened to that of Edna St. Vincent Millay.

RENAUDEL, PIERRE. French Socialist politician, died at Palma, Majorca, Apr. 2, 1935. Born in Moigny, Seine Inférieure in 1871, he joined the Socialist Party in 1899. He edited *L'Humanité* from 1906 to 1918, and afterwards was director of *La Vie Sociale*. In 1914 he was elected a deputy from Var. During the World War he was a member of the Army Commission, and from 1925 to 1926 served as vice president of the Commission for Universal Suffrage. From 1933 he was the leader of the right wing of the Socialist group in the Chamber of Deputies, and was instrumental in causing a breach in the party which resulted in the formation of the Neo-Socialists, of which he was the leader. His opposition to Fascism caused a furore at the Inter-Parliamentary Union in 1932.

RICE, EDWIN WILBUR, Jr., died Nov. 25, 1935.

RICHET, CHARLES, died Dec. 3, 1935.

ROBBINS, WARREN DELANO. American diplomat, died in New York City, Apr. 7, 1935. Born in Brooklyn, N. Y., Sept. 3, 1885, he graduated from Harvard in 1908, and in the following year joined the diplomatic service, and served as secretary to the Ministers to Portugal and Argentina. He served successively as 3d secretary at the Embassy, Paris (1911-14); 2d secretary, the Guatemala Legation (1914-16); was transferred to the Division of Latin American Affairs in 1916; served as 1st secretary, Embassy, Buenos Aires (1917); 1st secretary, Embassy, Santiago, Chile (1918-21), and then appointed chief, Division of Near Eastern Affairs. From 1922 to 1924 he was counselor at the Berlin Embassy and from 1925 to 1928 held the same position in Rome. For two years (1928-30) he was Envoy Extraordinary and Minister Plenipotentiary to the Republic of El Salvador, when he was appointed minister plenipotentiary and White House ceremonial officer, and then Chief of the new Division of Protocol of the Department of State, one of the most exacting of diplomatic posts inasmuch as it handles all questions relating to diplomatic immunity. In 1933, President Franklin D. Roosevelt, a cousin of Mr. Robbins, appointed him Envoy Extraordinary and Minister Plenipotentiary to Canada, a position he held until his death.

ROBINSON, BENJAMIN LINCOLN. American botanist, died at Jaffrey, N. H., July 27, 1935. Born in Bloomington, Ill., Nov. 8, 1864, he was graduated from Harvard University in 1887, received the doctor's degree at the University of Strassburg two years later. In 1890 he was appointed an assistant at the Gray Herbarium at Harvard, and two years later became its curator. For three years, 1891-94, he taught German. In 1899 he became Asa Gray Professor of Botany at Harvard. He retired as emeritus professor in 1935 because of ill health. A botanist of high rank,

he was particularly interested in the classification and distribution of the spermatophytes of North America, Mexico, northern South America, and the Galapagos Islands, and under his able direction, the Gray Herbarium grew from a small laboratory to one of the world's largest botanical collections. Dr. Robinson was a member of many scientific societies, and was president of the Botanical Society of America in 1900. Besides editing many technical papers, he edited the 7th edition of Gray's *New Manual of Botany* (1908), and in 1929 the Massachusetts Horticultural Society awarded him its centennial gold medal.

ROBINSON, EDWIN ARLINGTON, died Apr. 6, 1935.

ROCCO, ALFREDO. Italian jurist and politician, died in Rome, Aug. 28, 1935. Born in Naples, Sept. 9, 1875, he taught in various universities, and in 1913 turned to journalism, and served on various publications, including *Tribuna*, *Dovere nazionale*, which he founded in Padua in 1914; the anti-Socialist review, *Politica*, 1918; and *Idea nazionale*, 1919-22. A member of the Chamber of Deputies from 1921, he was one of the founders and principal representatives of the Nationalist movement, and early joined the Fascist organization. He was under-secretary for Treasury and Pensions in 1922 and president of the Chamber during one of the most delicate periods in Italian parliamentary history (1924-25). Appointed Minister of Justice Aug. 15, 1925, he aided in preparing the Lateran Pacts establishing the State of Vatican City in 1929, and also in that year prepared the new penal code. When the government was reorganized in 1932 he lost this post, but was made Rector magnificus of the University of Rome, to which he had returned as professor of economic law in 1930. A specialist in Fascist labor legislation, he wrote *Economia liberale-socialista e nazionale* (1914); *Il fallimento* (1917); *La crisi dello Stato e i Sindacati* (1921); *La dottrina del Fascismo* (1925); *La trasformazione dello Stato* (1927); *Principi di diritto commerciale* (1928).

ROCHE, ARTHUR SOMERS. American novelist, died in Palm Beach, Fla., Feb. 17, 1935. Born in Somerville, Mass., Apr. 27, 1883, he attended Holy Cross College and studied law at Boston University. He practiced for a year and then turned to journalism. From 1910 he was a regular contributor to many magazines, and in 1916 published his first novel, *Loot*. He served in the Military Intelligence Service during the War. Mr. Roche was a prolific writer of magazine serials with sure-fire plots and, as one reviewer said, "no reader resistance." One of his most popular serials was *Penthouse*, which was produced later as a motion picture. His novels included: *Plunder* (1917); *The Sport of Kings* (1918); *Uncasy Street* (1920); *Find the Woman* (1921); *The Day of Faith* (1921); *Devil-May-Care* (1926); *What I Know About You* (1927); *The Wise Wife* (1928); *The Woman Hunters* (1928); *Marriage for Two* (1929); *Four Blocks Apart* (1930); *Rhapsody in Gold* (1931); *The Wrong Wife* (1931); *The Great Abduction* (1932); *Slander* (1933); *Conspiracy* (1934). Also, he wrote a play, *The Crooks Convention*, produced in 1929, and was co-author of another play, *A Scrap of Paper* (1917).

ROGERS, WILLIAM PENN ADAIR, "WILL," died Aug. 15, 1935.

ROHLFS, ANNA KATHARINE GREEN (MRS. CHARLES). American novelist, died in Buffalo, N. Y., Apr. 11, 1935. Born in Brooklyn, N. Y., Nov. 11, 1846, in 1867 she was graduated from Ripley Female College, Poughkeepsie, N. Y. Her first novel, *The Leavenworth Case* (1878), an excellent detective story, in which she combined remarkable ability in the construction of plot with considerable knowledge of criminal law, won immediate success, and was followed by many more in the same vein. Her later works included *The Fingree Ball* (1903); *The Millionaire Baby* (1905); *The House of the Whispering Pines* (1910); *Golden Slipper and Other Problems of Violet Strange* (1915); *Mystery of the Hasty Arrow* (1917), and *The Step on the Stair* (1922). She published also two books of poetry and a dramatization of *The Leavenworth Case* (1892).

ROSS, SIR JOHN. Irish jurist, died at Sixmiles Cross, Tyrone Co., Northern Ireland, Aug. 17, 1935. Born in Londonderry, Dec. 11, 1854, he was educated at Trinity College, Dublin, and was elected president of the University Philosophical Society in 1876, and auditor of the College Historical Society, 1877. Admitted to the Irish bar in 1879, he became Queen's Counsel and Bench of the King's Inns in 1891. From 1892 to 1895 he was a Conservative member of Parliament from Londonderry, and in the following year was appointed Judge of the High Court of Justice in Ireland, chancery division. He held this post until 1921 when he was made Lord Chancellor of Ireland. He was the last to serve as such, for the office was abolished by statute in December, 1922, with the formation of the Irish Free State. Sir John served also as commissioner of Charitable Endowments and Bequests, 1898; chairman and governor, Royal Drummond Institution, 1899; Commissioner of National Education, 1905. He was knighted in 1919, and published *The Years of My Pilgrimage* (1924); *Pilgrim Scrip* (1927); *Essays and Addresses* (1930).

RUSHTON, VICE ADMIRAL EDWARD ASTLEY ASTLEY-English admiral, died in an automobile accident at Upper

Adhurst, near Petersfield, Hants, July 18, 1935. Born in Liverpool in 1879, he entered the Royal Navy in 1893. Promoted to lieutenant, he was selected, in 1901, to specialize in gunnery, and subsequently served as gunnery officer on various vessels. From 1914 to 1918 he was second in command and commanding H.M.S. *Southampton* and H.M.S. *Melbourne* of the Grand Fleet, and saw service at Heligoland, Dogger Bank, and Jutland. For his work in the last-named battle, he was mentioned in dispatches, promoted to captain, and made a Commander of St. Michael and St. George. After the War, he was transferred to the Admiralty, and from 1922 to 1925 was director of the Royal Naval Staff College. For the following two years he was commander of H.M.S. *Malaya*, and in 1927 was appointed naval aide-de-camp to King George V., and promoted to rear admiral and created a Companion of the Bath. He was again given shore duty in 1928 serving as Director of Manning in the Admiralty, but in 1931 saw sea service as commander of the 2d Cruiser Squadron, which was the first British squadron to be invited to Germany after the War. Promoted to vice admiral, in 1932, in 1935 he became vice admiral commanding the Reserve Fleet.

RUSSELL, GEORGE WILLIAM ("AE"), died July 17, 1935. RUSSELL, JAMES SOLOMON. American Negro clergyman and educator, died in Lawrenceville, Va., Mar. 28, 1935. Born of slave parentage in Palmer's Springs, Va., Dec. 20, 1857, he attended Hampton Normal and Agricultural Institute (1874-78), and St. Stephen's Normal Training School, Petersburg, Va., (1878-82). Also, he studied at the branch of the Theological Seminary of Virginia at Petersburg (1878-82), and in the latter year became a deacon in the Protestant Episcopal Church and assigned to Lawrenceville, Va. He was ordained priest in 1887, and in the following year founded the St. Paul Normal and Industrial School at Lawrenceville. He served as principal of the school until 1929 when he retired as principal emeritus. He was elected suffragan bishop of the Diocese of Arkansas in 1917 and of North Carolina in 1918, the first Negro to be so honored, but declined both positions. He was arch-deacon of colored work in Southern Virginia, and received the degree of D.D. from the Theological Seminary of Virginia in 1917, the degree of LL.D. from the College of Liberia, Monrovia, Africa, in 1922, and the gold medal of the Harmon Foundation in 1928.

RYAN, MARTIN FRANCIS. American labor leader, died in Kansas City, Mo., Jan. 17, 1935. Born at Coldwater, W. Va., Oct. 23, 1874, he received a public school education, and in 1895 was employed by the Southern Pacific Railway. Later he became associated with the Atchison, Topeka, and Santa Fe Railway, and in 1903 served as a member of the executive board of the Brotherhood of Railway Carmen of America. He was elected vice president of the Brotherhood in 1905 and general president in 1909. From 1927 he was on the executive council of the Railway Employees' Department of the American Federation of Labor, and in the following year was elected treasurer of the Federation. One of the organizers of the Union Labor Life Insurance Co., he was its treasurer from 1927. In 1918 he was a member of the First Labor Mission to Great Britain and France, and in 1924, with Samuel Gompers, a co-delegate to the Pan-American Federation of Labor Convention in Mexico.

SAENGLER, GUSTAVE. American music editor, died in New York City, Dec. 10, 1935, where he was born, May 31, 1865. He studied violin under Richter, Meyer, and Damrosch, and composition under Muller, and in 1883 played with the Metropolitan Opera Orchestra and the Philharmonic and Symphony Societies. As assistant conductor to Furst at the Empire Theatre (1893-1909), he had charge of all the music used in Frohman productions and also prepared original music. He became associated with Carl Fischer as arranger, reviser, and translator of music in 1897, but the work grew so heavy that in 1909 he retired from the theatrical world. He edited *The Metronome* and *The Musical Observer*, and collaborated with Leopold Auer in *Graded Course in Violin Playing* and *Graded Course in Ensemble Playing*. Besides many pieces and songs, he wrote a Concertino in G minor, 5 Silhouettes, 2 concert solos, 3 Miniatures, and "New School of Melody."

ST. JOHN, CHARLES E. (DWARD). American solar physicist, died in Pasadena, Calif., Apr. 26, 1935. Born in Allen, Mich., Mar. 15, 1857, he graduated from Michigan Normal College in 1876. From 1885 to 1892 he was teacher of physics at Michigan Normal College, and during his last two years there attended the University of Michigan. He studied at the University of Berlin (1894-95) and in the following year obtained his Ph.D. at Harvard. He then became instructor in physics at the University of Michigan, and in 1897 assistant professor, and professor (1899-1908). From 1907 to 1908 he was dean of the College of Arts and Sciences at Oberlin College, and in the latter year became astronomer at Mt. Wilson Observatory of the Carnegie Institution. A member of many scientific societies, he was president of the International Commission on Solar Physics, contributed many articles on solar physics and observational evidence of relativity to technical jour-

nals, and wrote a *Revision of Rowland's Preliminary Table of Solar Spectrum Wave Lengths*.

SALAMANCA, DANIEL, died July 17, 1935.

SATTERLEE, FRANCIS LE ROY. American roentgenologist, died at Montauk, L. I., Dec. 3, 1935. Born in New York City, Feb. 4, 1881, he was graduated from the College of Physicians and Surgeons in 1903 and later studied at St. John's College, Annapolis. At the age of 15 he took the first American X-ray photograph, using the Crookes tube which had been installed in the New York College of Dentistry. His interest in the use of the X-ray led to his making many experiments, and he invented a protective lead shield used when making X-rays, and was the first to X-ray the mouth and teeth. Burns received during his experiments ended his surgical career in 1916, and in 1922 he was compelled to retire as radiologist of the Flushing and Greenpoint Hospitals.

SAVILLE, MARSHALL HOWARD. American archaeologist, died in New York City, May 7, 1935. Born in Rockport, Mass., June 24, 1867, he was a special student in anthropology at Harvard from 1889 to 1894, and engaged in field work under Prof. F. W. Putnam. His many fruitful explorations were chiefly made in Latin America, and he explored the Maya ruins of Copan, Honduras, for the Peabody Museum (1891-92); became assistant curator in the American Museum of Natural History (1894-1902), and explored Palenque (1897-98), the ruins of Mitla and Oaxaca (1899, 1902, 1904). From 1903, he was professor of American archaeology at Columbia University, and served as honorary curator, Mexican and Central American Archaeology, American Museum of Natural History (1908-10); as member of the staff of the Museum of the American Indian, Heye Foundation (1918-32); as a member of the staff of the American Museum of Natural History from 1933. In that year he was also honorary professor of the Museo Nacional, Mexico. A founder of the Cortes Society and president of the American Anthropological Association, 1926-28, he published many monographs on anthropological and archeological subjects and contributed to the *NEW INTERNATIONAL ENCYCLOPEDIA*. In 1924 he received the degree of Sc.D. from the University of San Marcos, Lima, Peru.

SCARBOROUGH, DOROTHY. American author, died in New York City, Nov. 7, 1935. Born in Mt. Carmel, Tex., she was graduated from Baylor University in Waco, Texas, and studied at the University of Chicago, Oxford University, and Columbia University, from which she received the degree of Ph.D. in 1917. She was instructor in English at Baylor University (1905-14), assistant professor (1916); instructor in English at Columbia University (1916-18); lecturer (1919-22); assistant professor (1923-31), and associate professor with classes in novel and short-story writing (1931-35). She served as a book reviewer on the *New York Sun* from 1917 to 1918. Besides contributing short stories and verse to magazines, she wrote *Fugitive Verses* (1912); *The Supernatural in Modern English Fiction* (1917); *From a Southern Porch* (1919); *In the Land of Cotton* (1923); *Impatient Griselda* (1927); *The Stretch-berry Smite* (1932); *The Story of Cotton* (1933), and edited *Famous Modern Ghost Stories* (1921) and *Humorous Ghost Stories* (1921).

SCHALL, THOMAS D. American Senator, died in Washington from injuries received when struck by an automobile, Dec. 22, 1935. Born in Reed City, Mich., June 4, 1878, he graduated from the University of Minnesota in 1902, and the St. Paul College of Law, 1904. Shortly afterwards he was blinded by an electric shock. In 1912 Mr. Schall was an unsuccessful candidate for Congress on the Progressive ticket, but was elected on a Progressive Republican ticket in 1914, and served until 1924. While a Representative he was a member of the House Committee on Rules and chairman of the Committee on Flood Control. During the World War he supported war legislation, and favored adjusted compensation for ex-service men. He was elected to the Senate in 1924 after a bitter fight, when he was accused by Magnus Johnson, his opponent, of violation of the Corrupt Practices Act. After several investigations he was exonerated. Antagonistic to the "New Deal," he opposed its measures in a series of vitriolic attacks.

SCHINDLER, KURT, died Nov. 16, 1935.

SCHUCKING, WALTER, M. A., died Aug. 26, 1935.

SCOTT, SIR (JAMES) GEORGE. English colonial administrator, died at Grafton, Eng., Apr. 4, 1935. Born on Dec. 25, 1851, he was educated at King's College School, London, the University of Edinburgh, and Lincoln College, Oxford. A war correspondent in Perak (1875-76), Burma (1879), and Tongking (1883-85), in the following year he joined the Burma Commission, and for his work was mentioned in dispatches, received a medal with two clasps, and was thanked by the Commander-in-Chief, and the Governor-General in Council (1888). He was a member of the Anglo-Siamese Boundary Commission (1889-90), superintendent, Northern Shan States (1891), chargé d'affaires, Bangkok (1893-94), British commissioner, Mekong Commission (1894-96). Called to the bar of the Inner Temple in 1896, two years later he was appointed British commissioner on the Burma-China Boundary Commission. He became superintendent and political officer of the

Southern Shan States in 1902, and retired in 1910. Created a Commander of the Order of the Indian Empire in 1892, he was knighted in 1901. He was an advocate of the separation of Burma from India and vigorous in his denunciation of the Government's neglect of Burma. An authority on Burma and the Burmese, he contributed to the *Encyclopaedia Britannica* and to Hastings' *Dictionary of Religion*, and was the author of *The Burman, His Life & Notions* (2 vols., 1882); *Burma, As It Was, As It Is, and As It Will Be* (1886); *The Upper Burma Gazetteer* (5 vols., 1901); *Burma, a Handbook* (1906); preface to and translation of Dautremere's *Burma under British Rule* (1913); *Burma, a History* (1924); *Burma, a Handbook of Practical Commercial and Political Information* (1925); *Burma and Beyond; A Ragbag of Races* (1932).

SEDGWICK, ANNE DOUGLAS (MRS. BASIL DE SELINCOURT). American author, died in London, July 19, 1935. Born in Englewood, N. J., Mar. 28, 1873, she was educated at home and abroad and from 1882 lived abroad. She studied painting in Paris and exhibited some of her work, but after her first novel, *The Dull Miss Archmard*, was published in 1898, turned to writing. Her work was characterized by fine workmanship and with the publication of *Tante* (1911) her talents were acknowledged. Subsequently she published *The Nest* (1912); *The Encounter* (1914); *A Childhood in Brittany Eighty Years Ago* (1918); *Christmas Roses* (1920); *The Third Window* (1920); *Adrienne Toner* (1922); *The Little French Girl* (1924); *The Old Countess* (1927); *Dark Hester* (1929); *Philippa* (1930). In 1931 *Dark Hester* was produced as a play in London, and she was made a member of the National Institute of Arts and Letters.

SEEBERG, REINHOLD. German theologian, died in Berlin, Oct. 24, 1935. Born in Porraer, Livonia, Russia, he was taken to Germany at an early age, and studied at Dorpat (1878-82) and Erlangen (1882-84). Then he became privat-docent and associate professor and university preacher at Dorpat (1885-89); professor of church history and New Testament exegesis (1889-94), and of systematic theology (1894-98) at Erlangen. Thereafter he was professor of the last-named subject at the University of Berlin, and Dean in 1918-19. Also, he was director of the Institute of Social Ethics and Missionary Work in Berlin, and until 1933, president of the Christian Social Alliance. His works included: *Der Begriff der christlichen Kirche* (1885); *Lehrbuch der Dogmengeschichte* (2 vols., 1895-98, 2d ed., 3 vols., 1907-13); *Grundriss der Dogmengeschichte* (1901); 3d ed., 1910; *Die Grundwahrheiten der christlichen Religion* (1902); 5th ed., 1910; Eng. trans., *The Fundamental Truths of the Christian Religion*, (1908); *Offenbarung und Inspiration* (1908, Eng. trans., *Revelation and Inspiration*, 1910); *Alte und neue Moral* (1910); *System der Ethik* (1911); *Vom Sinn der Geschichte* (1913); *Christliche Dogmatik* (2 vols., 1924-25), *Geschichte und Gott* (1928); *Augustinus* (1930); *Ethik der Bergpredigt* (1934).

SEIFZ, DON CARLOS. American editor, died in Brooklyn, N. Y., Dec. 4, 1935. Born in Portage, O., Oct. 24, 1862, he was graduated from the Liberal Institute, Norway, Me., in 1880, and began reporting for the *Brooklyn Eagle*, becoming Albany correspondent of that paper in 1887. Two years later he was city editor and served until 1891 when he became assistant publisher of *The New York Recorder*. Thereafter, he was managing editor, *The Brooklyn World* (1893-94); advertising manager, the *New York World* (1895-97); business manager (1898-1923), manager, *The Evening World* (1923-26). He was associate editor of *The Outlook* (1926-27) and of *The Churchman* (1929-32). The author of many biographical works and books on piracy and adventure, his more important include *The Buccaneers* (1912); *Artemus Ward* (1919); *Joseph Pulitzer; His Life and Letters* (1924); *Under the Black Flag* (1925); *Horace Greeley* (1926); *The James Gordon Bennetts* (1928); *Lincoln, the Politician* (1931); and *The Trial of Captain William Kidd* (1933). He was president of the Authors Club from 1923 to 1927.

SEMBRICH, MARCELLA (PRAXADE MARCELLINE KOCHANSKA), died Jan. 11, 1935.

SHARPEY-SCHAFER, SIR EDWARD ALBERT, died Mar. 29, 1935.

SHAW, EUGENE WESLEY. American geologist, died in Washington, Oct. 7, 1935. Born in Delaware, O., July 29, 1881, he graduated from Ohio Wesleyan University in 1905. He was an instructor in botany there during 1903-05, and held a fellowship in geology at the University of Chicago from 1905 to 1907. From 1907 to 1921 he was mostly connected with the United States Geological Survey, and had charge of the natural gas valuation for the U.S. Treasury (1918-19), and was chief of the sub-section on sedimentation (1919-20). From 1921 to 1929 he acted as a consulting geologist, and made extensive investigations for oil corporations, and in 1929 became chief geologist for the Iraq Petroleum Co., London. He was credited with the discovery of the principal bodies of petroleum in Iraq. A member of many scientific societies, he was an authority on natural gas production, and the author of many technical papers on the subject.

SHORT, WILLIAM HARRISON. American clergyman, died in Philadelphia, Jan. 10, 1935. Born near College Springs,

Ia., Dec. 4, 1868, he attended Amity College and Beloit College, and graduated from the Yale Theological Seminary in 1897. He was ordained in the Congregational ministry in that year, and held pastorates in the West until 1908 when he became secretary of the New York Peace Society, which he served until 1917. Always interested in the subject of peace, he was connected with many organizations, including the League to Enforce Peace (1915-23); the 20th Century Fund (1922-23); League of Nations Non-Partisan Association (1923-25). He served as a delegate to the International Peace Conferences in 1910 and 1912, and as a member of the Committee that drafted covenants for the League of Nations (1914-18; 1921). He was treasurer of Rollins College, Fla., from 1925 to 1927, and then became director of the Motion Picture Research Council, Inc. The author of many pamphlets on international subjects, he edited the *League of Nations Herald* (1923-25) and was the author of *A Generation of Motion Pictures* (1928).

SHORTT, THE RT. HON. EDWARD, died Nov. 10, 1935. SHOWERMAN, GRANT. American editor, died in Madison, Wis., Nov. 13, 1935. Born in Brookfield, Wis., Jan. 9, 1870, he was graduated from the University of Wisconsin in 1896. From 1896 to 1898 he was a fellow in Latin there, and for the next two years a fellow of the Archaeological Institute of America at the American School of Classical Studies in Rome. Receiving the degree of Ph.D. from Wisconsin in 1900, he became professor of the classics there, a position he held until his death. During 1922-23 he was a professor of the American Academy in Rome, and from 1923 to 1932 was director of the summer session of the Academy. A contributor to leading literary magazines and philological journals, he wrote *The Indian Stream Republic and Luther Parker* (1915); *A Country Chronicle* (1916); *A Country Child* (1917); *Horace and His Influence* (1922); *Eternal Rome* (1924), *Century Readings in Ancient Classical Literature* (1925), *Rome and the Romans* (1931). In 1914, he translated Ovid's *Heroides et Amores* for Loeb's Classical Library.

SIBERT, BRIG. GEN. WILLIAM LUTHER, U.S.A., RET., died Oct. 16, 1935.

SILVER, GRAY. American agricultural economist, died in Martinsburg, W. Va., July 28, 1935. Born in Whitehall, Va., Feb. 17, 1871, he was educated in public and private schools, and engaged in farming in Virginia, Illinois, and Arkansas, breeding shorthorn cattle and Shropshire sheep. He was a member of the Virginia State Senate (1907-15), lieutenant governor (1911-13); member State Tax Commission of Virginia (1926-27). He served as a delegate to the Democratic national conventions of 1920, 1924, and 1928, and in 1930 was a member of the Federal Unemployment Commission. Appointed a delegate from West Virginia to the American Farm Bureau Federation following its organization in 1919 Mr. Silver was director and member of its executive committee until 1926. He organized, for the Farm Federation, the influential agricultural bloc action in Congress from 1920 to 1926. A pioneer and leader in cooperative marketing in the United States, he was decorated by the French Government for his distinguished service in agriculture.

SIMON, ROBERT EDWARD. American realtor, died in New York City, Sept. 7, 1935, where he was born Aug. 4, 1877. Educated in the public schools and at City College, he entered the real estate field, and became a member of the firm of L. J. Phillips & Co., in 1894. He remained with them until 1905 when he became vice president of Henry Morgenthau Co. He was president of this company from 1913 to 1916, and left in 1919 to establish his own business. During a long career in real estate he made many notable sales an outstanding one among them being the sale of what is now Times Square to the Ochs interests. In 1925 he became president of Carnegie Hall, Inc., the owners and operators of the building. Mr. Simon was a director of the City Housing Corp., the builders of Sunnyside, a model community on Long Island; a member of the School Finance and Administration Commission of New York State (1926); a founder of Town Hall; and founder and president (1921, 1926-28) of the United Parents Association of Greater New York Schools. In 1930 he received the annual medal of *Parents' Magazine* for his services to child welfare and parental education.

SMITH, JEREMIAH, JR. American lawyer and financial expert, died in Cambridge, Mass., Mar. 12, 1935. Born in Dover, N. H., Jan. 14, 1870, he was graduated from Harvard in 1892 and from the Harvard Law School in 1895. Thereafter he served as private secretary to Justice Gray of the United States Supreme Court, and in 1896 entered the firm of Herrick, Smith, Donald, and Farley. During the World War he was a captain in the Quartermaster Corps, and served on the American Peace Commission in 1919 as counsel to the Treasury Dept. In 1924 Smith was appointed Commissioner General for Hungary by the League of Nations, and was given charge of the financial reconstruction of that country. The Hungarian National Bank was established and in two years his work was completed. Also, he was an assistant to the American experts who drafted the Young Plan in 1929, and was a member of the Financial committee of

the League of Nations, but resigned in 1931 because of ill health.

SMITH, JESSIE WILLCOX. American illustrator and painter, died in Philadelphia, May 3, 1935, where she was born. Educated privately she studied art at the Pennsylvania Academy of Fine Arts and under Howard Pyle at Drexel Institute. Miss Smith illustrated many books, particularly Stevens' *Child's Garden of Verses*; Kingsley's *Water Babies*, and *At the Back of the North Wind*. Also she was known for her illustrative work in many magazines and her cover designs on *Good Housekeeping*. In 1925 and 1927 she designed posters for the Welfare Federation of Philadelphia Her child subjects, of which she made a specialty, were very popular and displayed genuine love for and insight into child nature. She received the Mary Smith Prize of the Pennsylvania Academy (1903); silver medal, St. Louis Exposition (1904); Beck prize, Philadelphia Water Color Club (1911); silver medal, San Francisco (1915).

SMITH, SYDNEY. American cartoonist, died in an automobile accident near Harvard, Ill., Oct. 20, 1935. Born in Bloomington, Ill., Feb. 13, 1877, in 1895 he began drawing for the *Bloomington Sunday Eve*. Subsequently he worked on the *Indianapolis News Press*, and *Sentinel*, *Philadelphia Inquirer*; *Pittsburgh Post*, and *Press*, *Toledo News Bee*. In 1911 he joined the staff of the *Chicago Tribune*, and drew cartoons known as "The Bunk of a Busy Brain," "Self Made Heroes," "Light Occupation," and "Old Doc Yak." In 1918 he began to draw "The Gumps," a comic strip which achieved nation-wide fame. It was widely syndicated, and made Mr. Smith one of the highest paid cartoonists in the country. Also, he drew "Ching Chow," a Chinese character given to sage sayings. In 1924, he wrote *Andy Gump: His Life Story*.

SNETH, E. (IAS) HERSEY. American educator, died at New Haven, Conn., Dec. 20, 1935. Born in Mountville, Pa., Aug. 7, 1857, he graduated from Lebanon Valley College, Pa. (1881), Yale Divinity School (1884), and received the degree of Ph.D. from Yale in 1889. He began teaching at Wesleyan University, and in 1889 went to Yale University as lecturer on the history of philosophy (1889-91); instructor in philosophy (1891-93); assistant professor (1893-98), professor (1898), professor and organizer of the department of the philosophy of religion (1912-23); professor emeritus (1923). Dr. Sneath organized and edited *The Modern Philosophers Series* (6 vols.) and *The Ethical Series* (3 vols.), and was the author of many works on religion and ethics, including *The Ethics of Hobbes* (1898), *Philosophy in Poetry* (1904), *Wordsworth—Poet of Nature and Man* (1912), *Religious Training in the School and Home* (1917); *At One with the Invisible* (1921), *Religion and the Future Life* (composite vol., 1922), *Shall We Have a Creed?* (1925), *Evolution of Ethics as Revealed in the Great Religions* (composite vol., 1927); *America's Greatest Sonneteer* (1928), with others, *Religion as a Power in Human Development* (1934). In collaboration he wrote and edited *Golden Rule Series* (6 vols., 1913); *Manual of Moral Instruction for School and Home* (1913); *The King's Highway Series* (8 vols., 1917); *Sonar of Purpose* (3 vols., 1929), *A Child's Garden of Song* (1929).

SOOTHILL, WILLIAM EDWARD. English minister and Chinese scholar, died in England, May 14, 1935. Born in Halifax, Jan. 23, 1861, he became a missionary of the United Methodist Church in 1882, and until 1907 served at Wenchow, where he established churches, schools, and a hospital. From 1907 to 1911 he was president of the Imperial University of Shansi Province, and from 1911-14, president of the proposed University for China (United Universities' Scheme). He directed religious work for the Y.M.C.A. from 1914 to 1918; was a member of the China Indemnity Statutory Advisory Commission (1925); a member of Lord Willingdon's Delegation to China (1926), and visiting professor at Columbia University, New York (1928). In later years he was professor of Chinese at Oxford University, and crown representative on the Governing Body of the School of Oriental Studies, London Institution. His works include *The Student's Pocket Chinese Dictionary*, *The New Testament in Wenchowese*; *China and the West* (1925); *A History of China* (1927); *China and England* (1928); *The Lotus of the Wonderful Law* (1930).

SORLEY, WILLIAM RITCHIE. British moralist, died in London, July 28, 1935. Born in Selkirk, Scotland, Nov. 4, 1855, he was educated at the University of Edinburgh and Trinity College, Cambridge. From 1882 to 1887 he was lecturer on the Cambridge University Local Lectures Syndicate, and Moral Sciences Board, and for the next year was deputy for the Professor of Philosophy of Mind and Logic at University College, London. He then went to University College, Cardiff, where he remained until 1894, when he became professor of moral philosophy at the University of Aberdeen. In 1900 he became Knightbridge Professor of Moral Philosophy at Cambridge, and retired in 1933. He gave the Gifford lectures at the University of Aberdeen from 1913 to 1915. His published works include *On the Ethics of Naturalism* (1885, new ed., 1904); *Recent Tendencies in Ethics* (1904); *The*

Interpretation of Evolution (1910); *The Moral Life* (1911, 4th ed., 1930); *Moral Values and the Idea of God* (Gifford lectures, 1918, 4th ed., 1930); *Reconstruction and the Renewal of Life* (1919); *A History of English Philosophy* (1920); *Tradition* (Herbert Spencer lecture, 1926). Also, he edited various lectures of Professor Adamson: *Development of Modern Philosophy* (2 vols., 1903), and with R. P. Hardie, *Development of Greek Philosophy* (1908).

STARR, HENRY E. (ETER). American psychologist, died in New Brunswick, N. J., Nov. 2, 1935. Born in Middletown, Pa., Sept. 13, 1893, he graduated from Gettysburg College, in 1917, and received the degree of Ph.D. from the University of Pennsylvania in 1922. From 1917 to 1922 he was an instructor in chemistry and toxicology at the School of Medicine of the University of Pennsylvania, and instructor in Physiological chemistry (1922-24); and instructor in psychology in the College and Graduate School (1924-27). He became assistant professor of psychology at Rutgers University in 1927, and in the following year became professor and director of the mental hygiene clinic there. Specializing in clinical and abnormal psychology, Dr. Starr contributed to medical and psychological journals.

STEARNS, THEODORE. American composer, died in West Los Angeles, Calif., Nov. 1, 1935. Born in Berea, O., June 10, 1880, he studied at the Oberlin Conservatory of Music and the Wurzburg Royal Conservatory, Bavaria. He conducted the Cleveland, Ohio, High School Orchestra, and played the viola with Cleveland Philharmonic, and edited *The Etude* (1899-1900). He was music critic of the *Chicago Herald Examiner* in 1922, and of the *New York Morning Telegraph* (1922-26; 1927-28). In 1927-28 he received the Guggenheim Foundation Award for study in Germany, and from 1929 to 1931 arranged radio programmes for Mittel-Europa Rundfunk and in the United States. From 1932 he was professor of music and chairman of the department at the University of California. His musical works, besides many songs, include *Atlantis* (1929); *Endymion*, an opera produced at Hofgesmar, Germany (1896); *Indian Suite* (1898); *Snowbird*, a lyric episode produced at Chicago (1923) and Dresden, Germany (1928); *Suite Caprese* (1927) produced by Los Angeles Philharmonic Orchestra (1932); *In Death's Garden*, a symphonic poem (1930). In 1931, he published *A Story of Music*.

STEELE, RUFUS (MILAS). American author, died in Boston, Dec. 25, 1935. Born in Hope, Ark., Mar. 3, 1877, he graduated from the Pacific Methodist College at Santa Rosa, Calif., in 1896. Turning to journalism, he served as editor, the *Redding (Calif.) Free Press* (1900-02); writer (1902-04) and Sunday editor (1904-06), *San Francisco Chronicle*; Sunday editor, *San Francisco Call* (1906-12). He was editor of the Division of Films, U.S. Committee on Public Information (1918-19), and in 1927 became a coach in magazine writing at the University of Miami, becoming professor of English there (1929-31). From Sept. 1, 1931, he conducted "The March of the Nations" in the *Christian Science Monitor*. A lecturer and writer on motion picture making, aviation, outdoor life, etc., he wrote *Rule G* (1915); *Acres for Industry* (1919); *What's Right with the Movies* (1925); *What's Right with Florida* (1925); *Scar Neck* (1930).

STEEL-MAITLAND, SIR ARTHUR HERBERT DRUMMOND RAMSAY. English politician, died at Rye, Eng., Mar. 30, 1935. Born on July 5, 1876, he was educated at Rugby and at Balliol College, Oxford, where he won many honors. He entered politics as secretary to the Chancellor of the Exchequer (1902-05), and was appointed special commissioner to the Royal Commission on Poor Laws (1906-07) and was a joint author of its *Report on Relation of Industrial and Sanitary Conditions to Pauperism* (1907). He served in Parliament as Conservative member for East Birmingham (1910-18); for the Erdington division of Birmingham (1918-29); and for the Tamworth division of Warwickshire (1929-35). He was chairman of the Unionist party in 1911, and was parliamentary Under-Secretary for the Colonies (1915-17) and joint Under-Secretary of State for the Foreign Office and to the Board of Trade, as head of the Department of Overseas Trade. Knighted in 1917, Privy Councillor in 1924, he became Minister of Labor in November, 1924, and served until June, 1929. He visited the United States in 1933 as the guest of the Rockefeller Foundation.

STEPHENSON, NATHANIEL WRIGHT. American educator and historian, died at Pomona, Calif., Jan. 17, 1935. Born in Cincinnati, O., July 10, 1867, he graduated from Indiana University in 1896, and later studied at the University of Cincinnati (1888-89), and at Harvard (1889-91). He was an editorial and staff writer on the *Cincinnati Tribune* (1892-95), and literary editor of the *Chicago Commercial Tribune* (1898-1900). For three years (1895-98) he was instructor in English at Indiana University, and in 1902 he accepted the appointment of professor of History at the College of Charleston, where he remained for 21 years. He lectured at Yale in 1920, and in 1922 was visiting lecturer in American History at Columbia University, also lecturing at the Columbia Summer School in 1921 and 1922. In 1927 he was appointed to the chair of history and biography at Scripps College. He edited

Chronicles of America, Photoplays from 1922 to 1927, and was the author of *An American History* (1913); *The Spiritual Drama in the Life of Thackeray* (1913); *Lincoln* (1922); *An Autobiography of Abraham Lincoln* (compiled, 1926); *Nelson W. Aldrich* (1930); *Typical Americans and Their Problems* (1930); *A History of the American People* (1934). He contributed the article on Lincoln to the 14th edition of the *Encyclopædia Britannica*.

STOVALL, PLEASANT A. American editor, died in Savannah, Ga., May 14, 1935. Born in Augusta, Ga., July 10, 1857, he graduated from the University of Georgia in 1875, and entered newspaper work on the Athens (Ga.) *Banner*. Until 1891 he worked on the *Augusta Chronicle*, and in that year he became one of the owners of the *Savannah Press*, which he sold in 1931. He then became editor of the *Savannah Evening Press*. He served as a member of the Georgia House of Representatives from 1902 to 1906, and from 1913 to 1920 was Envoy Extraordinary and Minister Plenipotentiary to Switzerland. For his work there during the World War he was honored by the Belgian Government. He was Georgia chairman of the Woodrow Wilson Foundation (1921-22). In 1891 he published a *Life of Robert Toombs*.

STUART, FRANCIS LEE. American engineer, died at Essex Fells, N. J., Jan. 15, 1935. Born at Camden, S. C., Dec. 3, 1866, he was educated at Emerson Institute in Washington, D. C., and in 1892 obtained work with the Baltimore and Ohio Railroad. Subsequently he served on the Nicaragua Canal Commission (1898) and on the Isthmian Canal Commission (1900). He returned to the B. & O. in 1901, and in 1905 became chief engineer with the Erie Railroad, remaining until 1911, when he again returned to the B. & O. He resigned in 1915 to become a consulting engineer. During the War, he was chairman of the terminal port facilities commission of the War Industries Board, and a member of the Depot Board of the War Department (1917), and chairman of the budget committee of the United States Railroad Administration (1918). Among the many projects with which he was connected were: Cunard Project, New York Harbor; Hydro-Electric Power Commission, Niagara Falls, N. Y. (1920); Port Development Commission, Baltimore (1921); New York Port Authority, vice chairman, technical board (1921). Transit and Advisory Board, Philadelphia (1923); Great Harbor Committee of 200, Los Angeles (1924-25); Grant Power Survey Board of Pennsylvania (1924).

SUMNER, WALTER TAYLOR. American Protestant Episcopal Bishop, died in Portland, Ore., Sept. 4, 1935. Born in Manchester, N. H., Dec. 5, 1873, he graduated from Dartmouth College in 1898 and from the Western Theological Seminary, Chicago, in 1904. He was a deacon in 1903 and ordained priest in 1904. For three years (1903-06) he was secretary to the Bishop of Chicago, and from 1904 to 1906 pastor of St. George's Church there. He served as Dean of the Cathedral of Sts. Peter and Paul and as superintendent of the City Missions of the Protestant Episcopal Church in Chicago from 1906 to 1915 when he was made Bishop of Oregon. Always interested in the best interests of the community, the Bishop served on many civic committees both in Chicago and in Oregon, and in 1922 he opposed the enactment of an Oregon State Law to do away with private and parochial schools. SUNDAY, WILLIAM ASHLEY ("BILLY"), died Nov. 6, 1935.

SYMONS, MARK. English artist, died at Wokingham, Feb. 13, 1935. Born about 1887, he studied art at the Slade School in London, but did not exhibit his work until several years before his death. He was a sound craftsman, and although his landscapes were generally ignored, he was known for his delightful child studies and for a series of pictures depicting Christ in modern life. The best known of these was "Were You There When They Crucified My Lord?" which was accepted by the Academy in 1930 and caused a furor in art circles. Others in the series were "In the Street of the Great City" (1932), "The Last Supper" (1933), and "The Earthly Paradise" (1934). Other of his works include a Madonna at Downside Abbey, "Ave Maria," in the Reading Art Gallery, and "The Day After Christmas" in the Bury Gallery.

SYSONBY OF WONERSH, FREDERICK EDWARD GREY PONSOMBY, FIRST BARON. English official, died in London, Oct. 20, 1935. Born on Sept. 16, 1867, he was educated at Eton, and in 1889 was a 2d lieutenant in the Grenadier Guards. From 1893 to 1894 he acted as aide-de-camp to the Viceroy of India. Subsequently he served as Equerry, assistant keeper of the Privy Purse, and assistant private secretary to Queen Victoria (1894-1901); to King Edward VII (1901-10); equerry and assistant private secretary to King George V (1910-12); Keeper of the Privy Purse from 1914; Treasurer of the King from 1920. From 1928 he was deputy governor of Windsor Castle and Constable of the Round Tower. Sir Frederick served in South Africa (1901-02) and in the World War (1914-18) as lieutenant colonel, being mentioned in dispatches. He was raised to the peerage in 1935 and was the author of *The Grenadier Guards in the Great War* (1920); *Letters of the Empress Frederick* (1929), and *Sidelights on Queen Victoria* (1930).

TAYLOR, EDWIN CASSIUS. American artist, died at New Haven, Conn., Nov. 27, 1935. Born in Detroit, Mich., in 1874, he removed to New York in 1893 where he attended the Art Students' League. Then he studied under Kenyon Cox for seven years, becoming an instructor in the latter's studio. In 1908 he joined the faculty of Yale University as drawing instructor in its School of Fine Arts. From 1922 he was chairman of the Department of Painting and Sculpture, as well as serving as Street professor of painting and design. Under his direction, drawing and painting were developed into a five-year comprehensive course. Professor Taylor's portraits of Lee Lawrie and Oliver Ellsworth are well-known and he has had the distinction of training the last 11 Prix de Rome winners.

THOMAS, ANDRÉ ANTOINE. French philologist and historian, died in Paris, May 19, 1935. Born at Saint-Yrieix-la-Montagne, in Creuse, Nov. 29, 1857, he attended the École des Chartes and the École des Hautes Études in Paris and the École Française in Rome. He taught in the faculty of letters at Toulouse from 1881 to 1889, and then at the University of Paris where he became professor of French Literature of the Middle Ages and of Romance philology. In 1889 he founded at Toulouse the quarterly review, *Les Annales du Midi* which he edited until 1898. He became a member of the Institute of France and director of studies at the École des Hautes Études. A fellow of the Académie des Lincei of Rome and the Académie des Sciences of Copenhagen, he wrote *Les États provinciaux de la France centrale sous Charles VII* (1879); *Francesco da Barberino* (1883); *Essais de philologie française* (1897); *Mélanges d'étymologie française* (1902); *Le Comté de la Marche et le Parlement de Poitiers* (1910); *Chanson de Sainte-Foi d'Agen* (1925); *Jean de Gerson et l'éducation des Dauphins de France* (1930). Also, he was a collaborator on the *Dictionnaire général de la langue française* (1889-1900).

THOMAS, AUGUSTUS ORLOFF. American educator, died in Washington, D. C., Jan. 30, 1935. Born in Mercer Co., Ill., Feb. 21, 1863, he received the B.Sc. degree from Western Normal College in 1891, and the Ph.D. degree from Amity College, College Springs, Ia., in 1894. After serving as principal of schools in Cambridge, Neb., during 1891-93, he was superintendent of schools in St. Paul, Neb. for the next three years, serving in the same capacity in Minden (1896-1901) and Kearney (1901-05). In the latter year he founded the State Normal School at Kearney and was its president until 1913. During 1915-16, he was state superintendent of public instruction in Nebraska and was Commissioner of Education in Maine from 1917 to 1929. In the National Educational Association, he was president of the department of normal schools and chairman of the foreign relations committee. President of the World Federation of Educational Associations during 1923-27, he was its secretary general from 1931. He was the author of *Rural Arithmetic* (1916) and *A Boy's Choice of a Profession* (1921).

THOMAS, HERBERT HENRY. English geologist, died in London, May 12, 1935. Born Mar. 13, 1876, he attended Sidney Sussex College, Cambridge. From 1898 to 1901 he was an assistant in geology at Oxford and from 1901 to 1911, was a member of the Geological Survey. From 1911 he was petrographer to the Geological Survey, Department of Scientific and Industrial Research. Of the Geological Society, he was secretary during 1921-22, and vice president, 1922-24. He received the Geological Society's Murchison Medal in 1925 and was president of Section C of the British Association in 1927. Also, in the same year he was made a fellow of the Royal Society. A contributor to the *Quarterly Journal of the Geological Society*, he wrote many reports and pamphlets on geological subjects.

THOMAS, JOHN JENKS. American neurologist, died in Boston, Mass., July 17, 1935. Born in Columbus, O., Sept. 6, 1861, he received the M.A. and M.D. degrees from Harvard University in 1890, and then attended the universities of Heidelberg, Berlin, and Vienna. From 1893 to 1925 he was physician in charge of diseases of the nervous system at the Boston City Hospital and consulting physician there after 1925. At the Children's Hospital, he served as assistant neurologist (1893-1913); neurologist (1913-19), and consulting neurologist from 1919. At the Tufts College Medical School, he was instructor in neurology (1902-06), and after 1916 professor emeritus. Also, he was an associate in neurology at the Harvard Graduate School of Medicine. In the World War he was a consulting psychiatrist in the Medical Corps of the U.S. Army with the rank of major. A fellow of the American Association for the Advancement of Science, he was president of the Boston Society of Psychiatry and Neurology in 1911, and co-author of *Modern Treatment of Nervous and Mental Diseases*.

THOMAS, M(ARTHA) CAREY, died Dec. 2, 1935. THOMPSON, EDWARD HERBERT. American archaeologist, died at Plainfield, N. J., May 11, 1935. Born in Worcester Co., Mass., Sept. 28, 1860, he was graduated from the Worcester Technical Institute in 1879. Appointed American consul in Yucatan in 1885, he remained there in that capacity until 1909. He spent many years exploring the ruins of the Maya civilization, at one time devoting 14

months to the collection of material for the Peabody Museum to exhibit at the World's Fair in Chicago in 1893. He bought a plantation on the site of Chichen, and after rebuilding the original plantation house, converted it into a headquarters for a group of scientists. He discovered the "Hidden City" of Yucatan and uncovered the "Maya Venus," the mausoleum of the high priest, the Temple of the Painted Columns, and the ancient city of Old Chichen. After exploring the Sacred Well of Chichen, Itza, he found evidences of sacrificial rites held there, and in 1923, announced that he had also discovered there, bones of young women, Mayan jewelry, fragments of textiles, and weapons with jewelled finishings. He was the author of *Children of the Cave* (1929), and *People of the Serpent* (1932).

THOMPSON, WILLIAM GOODRICH. American lawyer, died at Chestnut Hill, Mass., Sept. 12, 1935. Born at Peacham, Vt., Nov. 16, 1864, he received the LL.B. degree from the Harvard Law School in 1891, and in the same year established a law practice in Boston. During 1893-95 he was assistant U.S. Attorney for the District of Massachusetts. From 1925 he was a member of the law firm of Thompson, Spring, and Mears. His best known case was the defense of Sacco and Vanzetti in 1927. His zeal and tireless effort in their behalf won for him the admiration of leading legal figures. He lectured at the Harvard Law School between the years 1912-34 on the subjects of brief making, preparation of cases, and practice.

THOMSON, ARTHUR. English anatomist, died at Oxford, Feb. 7, 1935. Born in London, Mar. 21, 1858, he attended the University of Edinburgh, being appointed in 1880, junior, and later senior, demonstrator in anatomy there. In 1885 he lectured on anatomy at Oxford University. At various times he was an examiner to the leading English universities, and during 1919-34, held the Lees chair of anatomy at Oxford University. Also, from 1900 to 1934, he was professor of anatomy at the Royal Academy. He represented Oxford University on the General Medical Council during 1904-29 and was a former president of the Anatomical Society of Great Britain and Ireland, of the Oxford Art Society, and of the Anatomical Section of the International Medical Congress held in London in 1913. He wrote *Handbook of Anatomy for Art Students*, *The Anatomy of the Human Eye*, and *The Ancient Races of the Theraid* (with D. Randall MacIver).

THOMSON, SIR FREDERICK CHARLES. Scottish politician, died in Edinburgh, Apr. 21, 1935. Born May 27, 1875, he attended University College, Oxford, and Edinburgh University, and was called to the bar of the Inner Temple in 1904. In the World War he served in Egypt with the Scottish Horse and in Salonika with the Lovat Scouts. In 1918 he entered Parliament as Conservative member for South Aberdeen and continued to represent that constituency until his death. From 1919 to 1922 he was parliamentary private secretary to Sir Robert Horne and for several months in 1923, was Junior Lord of the Treasury. In the same year he became King's Counsel, and during 1923-24, was Solicitor General for Scotland. From 1924 to 1928, he was Junior Lord of the Treasury in the ministry of Stanley Baldwin, and during 1928-29, and from September to November, 1931, he served as vice chamberlain to the Royal Household. From 1931 he was Treasurer of the Royal Household. He was created a baronet in 1929.

THORNE, G(ABRIEL) WISNER. American publisher, died at Spring Lake, N. J., July 13, 1935. Born in Newark, N. J., Sept. 16, 1849, he attended Newark Academy and then entered the newspaper field as a reporter on the *Newark Evening Call*. In 1876 he went over to the *Newark Journal* in the same capacity, and in 1880, joined the staff of the *Newark Sunday Call*. On the incorporation of the *Newark Call Printing and Publishing Co.* in 1899, he was elected its president. Previously he had been treasurer and editor-in-chief. He retained the office of president up to a short time before his death, and introduced a section of social news, a sports page, and a question and answer column in the *Call*.

THORNTON, WILLIAM MYNN. American educator, died at Charlottesville, Va., Sept. 11, 1935. Born in Cumberland Co., Va., Oct. 28, 1851, he was graduated from the University of Virginia in 1870, and after taking special courses in engineering there during 1871-73, taught at Davidson College, N. C. In 1875 he returned to the University of Virginia as adjunct professor of applied mathematics and civil engineering. He retired as professor emeritus in 1931. Also, while there, he served as chairman of the faculty (1888-96), and dean of the department of engineering (1904-25). He was U.S. Commissioner to the International Exposition held in Paris in 1900, and a member of the Jury of Awards for civil engineering at the St. Louis Exposition in 1904.

TILDEN, DOUGLAS. American sculptor, died in Oakland, Calif., Aug. 6, 1935. Born at Chico, Butte Co., Calif., May 1, 1860, he lost his hearing at the age of five and was subsequently educated at the State Institution for the Deaf at Berkeley, Calif. After graduation he remained there as a teacher until 1887. In that year he removed to New York where he attended the National

Academy of Design. Later, he studied under Ward, Flagg, and Mowbray, and under Chopin in Paris. From 1894 to 1900 he was professor of sculpture at the Mark Hopkins Art Institute of the University of California. Mayor Phelan appointed him honorary member of the committee on the artistic improvement of San Francisco. He was vice president of the first International Congress of the Deaf which he started during the World's Fair in Paris in 1889, thereafter serving as member of the committee on programme for the Second Congress at the World's Columbian Exposition in 1893, and for the Third Congress held in Paris in 1900. Tilden's best known works are: "Baseball Player" (1899, Golden Gate Park, San Francisco); "Tired Boxer" (1890, Olympic Club, San Francisco); "Indian Bear Hunt" (1892); "Football Players" (1893); "Native Sons' Fountain" (1894), and the "Mechanics' Fountain," both in San Francisco. His public monuments include: "Commemoration of the Admission of California into the Union"; "California Volunteers of the Spanish-American War"; the memorials to Junipero Serra in San Francisco, and to Senator Stephen M. White in Los Angeles. He received the following awards: Honorable mention at the Paris Salon, 1890; Medal of the Paris Exposition, 1900; commemorative gold medal of the St. Louis Exposition, 1904, and the gold medal of the Seattle Exposition (1894).

TOKONAMI, TAKEJIRO. Japanese statesman, died in Tokyo, Sept. 8, 1935. Born at Kagoshima, in 1863, he was graduated from the University of Tokyo in 1890, and entering the civil service, began his career at the Home Office. In 1901 he became Governor of Tokushima-ken, and three years later, was named Director of Local Administration. During 1911-12 he was Vice Minister, and in 1913, president of the Imperial Government Railways. Leader of the Seiyuhontō party, he held the portfolio of Home Affairs in the Seiyūkai Cabinet during 1918-22.

TOMLIN OF ASH, THOMAS JAMES CHESHVIRE, BARON. English jurist, died Aug. 12, 1935, at Canterbury, Kent, where he was born May 6, 1867. He received his education at New College, Oxford, and was called to the Bar of the Inner Temple and Lincoln's Inn in 1891. After serving as junior equity counsel to the Board of Inland Revenue and to several other official boards, he became King's Counsel in 1913, and five years later, was appointed to the Bench of Lincoln's Inn. In 1922 he became counsel to the Royal College of Physicians, and served during 1923-1929 as Judge of the High Court in the Chancery Division. Named Lord of Appeal in Ordinary in 1929, he was created a life peer and made a member of the Privy Council in the same year. Knighted in 1923, he was chairman of the Lord Chancellor's Committees on the reorganization of the royal courts of justice staff, and of principal probate registry and district probate registries (1919-22), Royal Commission on Awards to Inventors from 1923, Child Adoption Committee (1925), and many others.

TRUESDALE, WILLIAM HAYNES. American railway official, died at Greenwich, Conn., June 2, 1935. Born in Youngstown, O., Dec. 1, 1851, he received a common school education and between the years 1869-83, held various positions on railways. In 1883 he became an assistant to the president of the Minneapolis and St. Louis Ry., succeeding to the office of vice president in the same year, and president in 1887. During 1888-94 he acted as receiver for the same road. In the latter year he was third vice president and general manager of the Chicago, Rock Island, and Pacific Ry., rising to the first vice presidency in 1898. In March of the next year, he went over to the Delaware, Lackawanna, and Western Ry., of which until July 1, 1925, he was president and a member of the executive committee. From the latter date he was chairman of the board of managers. During his régime, the company paid its stockholders dividends far in excess of the original market value of the road. Truesdale was a vice president of the Chester R. R. Co., and the Mutual Life Insurance Co. of N. Y., and a director of the Western Union Telegraph Co.

TSUBOUCHI, YUZO. Japanese author, died in Tokyo, Feb. 28, 1935. Born in Aichi-ken, in 1859, he was graduated from the University of Tokyo in 1882, and in the same year, became a professor at Waseda University. He retained the post up to his retirement a few years ago as professor emeritus. Widely known as a novelist and dramatist, he translated all of Shakespeare's plays into Japanese. His other works include: *Miscellaneous Writings of Harukyo* and *Kiri Hsoka*.

TYLER, LYON GARDINER. American educator and author, son of former U.S. President Tyler, died Feb. 12, 1935, in Charles City Co., Va. where he was born in August, 1853. He received the M.A. degree from the University of Virginia in 1875 and during 1877-78, taught at William and Mary College. After serving as principal of the high school in Memphis, Tenn. from 1878 to 1882, he returned to Virginia where he practiced law in Richmond for the next six years. He was named president of William and Mary College in 1888, retiring in 1919 as president emeritus. A member of the State Board of Education (1903-07), he was chairman of the State Library Board

after 1915. Besides editing the *William and Mary Quarterly Historical Magazine* which he founded in 1892, and other historical works, he wrote *The Letters and Times of the Tylers* (1884, 3d ed., 1896); *Parties and Patronage in the United States* (1891); *Cradle of the Republic* (1900, 2d ed., 1906); *England in America* (1904), and *Williamsburg, the Old Colonial Capital* (1907).

ULYANOVA, ANNA ILYINICHNA YEIZAROVA. Russian Bolshevik, and sister of Nikolai Lenin, died near Moscow, U.S.S.R., Oct. 19, 1935. Born in Nizhni-Novgorod about 1864, she attended the gymnasium at Simbirsk (now Ulyanovsk) and subsequently the Bestuzhev courses in St. Petersburg. She commenced her revolutionary activities early and was first arrested and exiled in 1887 for her part in a plot to assassinate Czar Alexander III. Perhaps her most important achievement was the establishment of contact with her brother while he was in prison in 1896. She became associated with the Bolsheviks in 1903, and from that time held numerous committee posts in the Communist party, and for many years was connected with *Pravda*, the party newspaper. Arrested and imprisoned in 1916 and again in 1917, she was released by the revolutionary forces in October of the latter year, and from 1921 was a member of the historical research commission, Istpart, which was collecting the facts and history of the revolution. Also, she was the author of several books on Lenin.

UNWIN, THOMAS FISHER. English publisher, died in Midhurst, Sussex, Feb. 6, 1935. Born in London, Jan. 24, 1848, he was educated in the City of London School, and in 1882 founded the publishing house that bears his name. He was credited with having discovered Joseph Conrad, and published *Almayer's Folly* in 1895. A Liberal in politics, he was an active member of the National Liberal Club. Also, he was a joint founder and member of the First Council of Publishers' Association; joint founder and member of the First Committee of Friends of Russian Freedom. He served on the South African Conciliation Committee and was a governor of the London School of Economics. In 1884 he founded the Johnson Club.

URLUS, JACQUES. Dramatic tenor, died at Noordwijk, The Netherlands, June 6, 1935. Born in Hergenrath, Prussia, Jan. 9, 1868, he was brought to Holland by his parents. He began his musical studies at Utrecht, and continued them at Amsterdam under Averkamp and Nolthenius and at the conservatory. His debut took place in 1891 at the opera in Amsterdam, where he remained for six years. Engaged for the Leipzig Opera in 1900, he was invited to participate in the Wagner festivals at Bayreuth and Munich. He appeared at Covent Garden, London, in 1910 as Tristan, and in the following year in *Tannhauser*, appearing in *Parsifal* in 1914 and again in 1924. His American debut was made in Boston in *Tristan und Isolde* in 1912, and from 1913 to 1917 he was a member of the Metropolitan Opera Company. He appeared there again in 1923. Mr. Urlus was particularly known for his interpretation of Wagnerian rôles.

VAN SWERINGEN, MANTIS JAMES. American financier, died in Cleveland, O., Dec. 12, 1935. Born in Wooster, O., July 8, 1881, he received a public school education, and in 1907 joined his brother Orix Paxton Van Sweringen in the real estate business in Cleveland. From that time their careers were closely connected. They developed Shaker Heights, a Cleveland suburb, and entered the traction field through the building of a street car line connecting that suburb with the city of Cleveland. In 1916, they secured control of the New York, Chicago, and St. Louis Railroad (the Nickel Plate), 523 miles long connecting Buffalo with St. Louis, from the New York Central Railroad, and proceeded to develop it until it was one of the most powerful lines in the country. By 1924 their railroad empire was composed of the Nickel Plate, the Erie, the Chesapeake and Ohio, the Hocking Valley, and Pere Marquette railroads. In February, 1929, they acquired control of the Missouri Pacific and its subsidiary lines, which carried their system into the Far West, but the necessity for the spending of huge sums of money and the financial collapse of that year, seriously endangered their investment, and in 1933 the line went into bankruptcy. Late in 1935 they acquired partial control of their holdings, buying them back at auction. At the time of his death, Mr. Van Sweringen was chairman of the board of the Nickel Plate Railroad, vice president of the Allegheny Corporation, the chief holding company of their railroad interests, and vice president of the Chesapeake Corporation. See JOHN JOSEPH BERNET.

VEDDER, HENRY CLAY. American clergyman and educator, died in Chester, Pa., Oct. 13, 1935. Born in De Ruyter, N. Y., Feb. 26, 1853, he was graduated from the University of Rochester in 1873 and from Rochester Theological Seminary in 1876. In 1897 he received the degree of D.D. from the University. Dr. Vedder began his career as a member of the editorial staff of the *The Examiner*, a Baptist newspaper in New York in 1876, and in 1892 became its editor. Also, he edited the *Baptist Quarterly Review* from 1885 to 1892. Appointed to the chair of church history at Crozer Theological Seminary in 1894, he retired in 1926, and from 1929 was an editorial writer on the *Chester Times*. Besides contributing to

magazines, newspapers, and encyclopædias, he was the author of *Baptists and Liberty of Conscience* (1885); *A Short History of the Baptists* (1891; 1907); *The Dawn of Christianity* (1894); *A History of the Baptists of the Middle States* (1898); *The Baptists* (a volume in the *Story of the Churches* series, 1903); *Our New Testament—Where Did We Get It?* (1908); *Socialism and the Ethics of Jesus* (1912); *The Reformation in Germany* (1913); *The Gospel of Jesus and the Problems of Democracy* (1914); *The Johannine Writings and the Johannine Problem* (1917); *The Fundamentals of Christianity* (1921), which caused a controversy in the Church and led to cries of heresy; *A Short History of Baptist Missions* (1927).

VICTORIA ALEXANDRA OLGA MARY. English princess, the daughter of King Edward VII and Queen Alexandra, and a sister of King George V, died at Iver, Buckinghamshire, Dec. 3, 1935. Born in Marlborough House, London, July 6, 1868, she was educated privately. Unmarried, she was the constant companion of her mother, particularly after she became a widow, and upon her death in 1925, devoted herself to the work of the Alexandra Rose Day Fund, a memorial. Princess Victoria was an expert bookbinder, gardener, and photographer. Also, she was interested in needlework, the collection of old glass and silver, and was an accomplished musician and painter. During the World War she visited the British hospitals and camps both at home and abroad. While residing at Iver, she was lady grand president of the Iver Horticultural Society. She held the Imperial Order of the Crown of India (conferred by Queen Victoria, Aug. 6, 1887), Royal Order of Victoria and Albert, first class, and Dame Grand Cross of the Order of the Hospital of St. John of Jerusalem.

VINCENT, THE MOST REV. BOYD. American Protestant Episcopal bishop, died in Cincinnati, O., Jan. 14, 1935. Born in Erie, Pa., May 18, 1845, he graduated from Yale University in 1867 and in 1889 received the degree of S.T.D. from Berkeley Divinity School. A deacon in 1871 and priest in 1872, he served as assistant at St. Paul's Church, Erie (1871-72), rector, Cross and Crown Church, Erie (1872-74), rector, Calvary Church, Pittsburgh (1874-89). He then became coadjutor bishop of Southern Ohio, and in 1904, bishop, retiring in 1929. During his bishopric, he was presiding judge of the Court of Review of the 5th department of the Protestant Episcopal Church (1904), president of the Missionary Council of the 5th department (1907), and chairman of the House of Bishops (1910-16). He wrote *God and Prayer* (1897); *Our Family of Vincents* (1924); *The Pastoral Epistles for Today* (1930), and *Recollections* (1933).

VOLK, (STEPHEN ARNOLD) DOUGLAS, died Feb. 7, 1935. VOPICKA, CHARLES J. American manufacturer and diplomat, died in Chicago, Sept. 3, 1935. Born in Bohemia, Nov. 3, 1857, he was educated in the high schools and a business college of his native land, and came to the United States in 1880, settling in Chicago in 1881. Until 1889 he was in the real estate and banking business, and thereafter became an organizer and president of the Atlas Brewing Company. Civic minded, he served as a member of the West Side Park Commission (1894-97), of the School Board (1901-02), of the Board of Local Improvements (1902-04), the Charter Convention (1906), and the Chicago Board of Education (1927-30). In 1904 he was an unsuccessful candidate for Congress from the fifth district, Illinois. President Wilson appointed him Envoy Extraordinary and Minister Plenipotentiary to Rumania, Bulgaria, and Serbia in 1913, and he served until 1920, when he resigned. A diplomatic representative of the United States, he served also as adviser to England, Italy, Germany, Russia, Serbia, Rumania, and Turkey during the World War. For his work he received the Order of Mare Cruce, Rumania; the Order of the White Eagle, Serbia; and the War Medal, Czechoslovakia. In 1921 he published *Secrets of the Balkans*.

VOS, HUBERT, died Jan. 8, 1935.

VUVYAN, VICE AIR MARSHAL SIR VYELL. English naval officer, died in London, Sept. 30, 1935. Born in 1875, he entered the navy at an early age, and in 1897 served in the punitive naval expedition against the King of Benin, and received a medal and clasp. He served in various capacities until 1911 when he was appointed to the staff of the Royal Naval War College. In the following year he was War Staff officer, and in the next year assistant to the Chief of the War Staff. Called to active duty, he served in the Dardanelles in charge of the coordination of the sea, land, and air forces (1914-15) and was awarded the French Legion of Honor, the American Distinguished Service Medal, and was created a Companion of the Distinguished Service Order. After the War he was transferred to the Royal Air Force, and in 1919 was appointed second in command and air vice marshal. He retired in 1925 and was appointed one of the government directors of Imperial Airways. Made a Commander of the Order of the Bath in 1918, he was knighted in 1923.

WARD, ALBERT NORMAN. American clergyman and educator, died near Bel Air, Md., Sept. 22, 1935. Born in Harford Co., Md., Nov. 27, 1871, he received the B.A.

degree from Western Maryland College in 1895 and entered the ministry of the Methodist Protestant Church two years later. Then he held pastorates in Maryland and Washington, D. C., until 1913 when he became vice president of Western Maryland College. Relinquishing that office in 1917, he returned to a pastorate at Salisbury, Md., where he remained until 1919. The following year was spent as chancellor of the Kansas City University. Then he returned to Western Maryland College in 1920 as president and retained the office until his death. He served as one of 15 churchmen to negotiate for the consolidation of the Methodist Protestant and Southern Methodist branches of the church.

WARDE, FREDERICK B. American tragedian, died in Brooklyn, N. Y., Feb. 7, 1935. Born at Warrington, Oxfordshire, England, Feb. 23, 1851, he studied law but abandoned it for the theatre. He made his first stage appearance at Sunderland, England, in 1867, subsequently playing in Glasgow, Leeds, and Manchester. He came to the United States in 1874 and, after playing leading rôles at Booth's Theatre, New York, for the next three years, he began to star especially in Shakespearean tragedies in 1881. From 1893 to 1903 he was in partnership with Louis James. He lectured frequently on dramatic subjects after 1907. Returning to the stage three years later, he played in *Timon of Athens*, and *Julius Caesar*. About 1923 he retired from the stage and devoted his leisure to writing. He was the author of *The Fools of Shakespeare: An Interpretation of Their Wit, Wisdom, and Personalities* (1913), and *Fifty Years of Make Believe* (1920).

WATSON, SIR WILLIAM, died Aug. 13, 1935.

WELD, HERBERT English explorer, died Feb. 5, 1935. Born about 1852, he attended Queen's College, Oxford, and in 1891, travelled through Persia. Before he travelled through Cyrenaica in 1895, he led an expedition to Persepolis and brought back moulds of reliefs which are now in the British Museum and the Louvre. His researches there resulted in a plan of restoration. In 1899 he was in Somaliland and Abyssinia, bringing back mementos which he presented to the British Museum. During the Boer War, he served as a correspondent for the *Morning Post*, and in 1900, he was in Abyssinia again, exploring and mapping the course of the Blue Nile below Tsana. In 1922 he obtained permission to excavate Tell Aheimar, ancient Kish. In the latter undertaking he obtained thousands of inscribed tablets and museum pieces, which he gave to the Ashmolean Museum at Oxford. He wrote *Royal Chronicle of Abyssinia* and articles in the *Journal of the Royal Geographical Society*.

WELLER, THE MOST REV. REGINALD HEBER American prelate of the Protestant Episcopal Church, died at Aurora, Ill., Nov. 22, 1935. Born at Jefferson City, Mo., Nov. 6, 1857, he received the B.D. degree from the Nashotah (Wis.) Theological Seminary in 1884. Ordained a priest in the latter year, he held various charges in Wisconsin at Eau Claire, Waukesha, and Stevens Point between 1884-1900, being consecrated coadjutor bishop of Fond du Lac on Nov. 8, 1900. He was named Bishop of the Diocese of Fond du Lac in 1912 and remained there until 1933 when he retired because of failing health. In 1919 he toured Europe and Asia Minor, in the hope of bringing together the Anglican and Greek and Russian Orthodox churches.

WENT, FRIEDRICH AUGUST FERDINAND CHRISTIAN. Dutch botanist, died at The Hague, July 25, 1935. Born in Amsterdam, in 1863, he attended the universities of Amsterdam, Bonn, and Paris. From 1891 to 1896 he was director of the sugar cane Experimental Station in Java and in the latter year, was appointed to the chair of botany at Utrecht University. He was the Dutch government's delegate to the Pacific Science Conference held in Tokyo in 1926. A former president of the Central Organization for Applied Science in the Netherlands, Professor Went was the author of many text books on botany and plant physiology.

WERNER, ALICE. English educator, died at Welwyn Garden City, Hertfordshire, June 9, 1935. Born June 26, 1859, she attended Newnham College, Cambridge. During 1890-93 she worked on the *Review of Reviews* and from 1892 to 1900, was a contributor to the *Speaker*. In Africa during 1893-96, she started private classes for the study of African languages. On her return to England, these classes were transferred to King's College and nine years later, were recognized by the University of London. From 1911 to 1913 she did research work in British East Africa. At the School of Oriental Studies, she was a lecturer in 1917, and later, a reader. In 1921 she was invited to occupy the chair of Swahili and the Bantu Languages at the University of London. She retired as professor emerita in 1930. Created a Commander of the Order of the British Empire in 1931, she was made a Fellow of the Royal Anthropological Institute, and received the Anne Ewart Travelling Scholarship in 1911 and the African Society's silver medal in 1931. Her publications include: *A Time and Times* (poems, 1886), *The Captain of the Locusts, and Other Stories* (1899); *Chapenga's White Man* (1901); *Native Races of British Central Africa* (1906); *Introduction to the Study of African Languages* (1915), *The*

Language-Families of Africa (1916, 2d ed., 1925); *An Introductory Sketch of the Bantu Languages* (1919); *African Mythology* (1925); *Structure and Relationships of African Languages* (1929); *African Stories* (1932), and *Myths and Legends of the Bantu* (1933).

WHITE, DAVID. American geologist, died in Washington, D. C., Feb. 7, 1935. Born at Palmyra, N. Y., July 1, 1862, he was graduated from Cornell University in 1886, and in the same year, began his long association with the U. S. Geological Survey. In the latter, he rose to be senior geologist. Also, from 1903, he was curator in paleobotany at the Smithsonian Institution. An associate of the Carnegie Institution, he wrote many papers on geology and paleontology.

WHITLEY, JOHN HENRY, died Feb. 3, 1935.

WHITTAKER, THOMAS English author, died in London, Oct. 3, 1935. Born Sept. 25, 1856, he attended the Royal College of Science, Dublin, and was graduated from Oxford University in 1877. He contributed his first article to the *Mind* in 1881. His publications include *Essays and Notices, Philosophical and Psychological* (1895); *The Neo-Platonists: A Study in the History of Hellenism* (1901, 2d ed., 1918); *The Origins of Christianity, with an Outline of Van Manen's Analysis of the Pauline Literature* (1904, 4th ed., with Epilogue, 1933); *Apollonius of Tyana, and Other Essays* (1906); *The Liberal State* (1907, 2d ed., 1928); *Primer of Comte and Mill* (1908); *Schopenhauer* (1909); *Priests, Philosophers, and Prophets: a Dissertation on Revealed Religion* (1911, 2d ed., 1925); *The Theory of Abstract Ethics* (1916); *Macrobius* (1923); *The Metaphysics of Evolution* (1926); *Prolegomena to a New Metaphysic* (1931); *The Origins of Christianity* (1933), and *Reason: A Philosophical Essay with Historical Illustrations* (1934).

WILDER, WILLIAM HAMLIN American ophthalmologist, died in Chicago, Sept. 24, 1935. Born in Covington, Ky., Dec. 16, 1860, he received the M.D. degree from the Medical College of Ohio in 1884 and then attended the universities of Göttingen, and Vienna. In 1884 he established a medical practice in Cincinnati and on removing to Chicago in 1892, began to specialize in diseases of the eye. In 1907 he was named to the chair of ophthalmology at Rush Medical College, University of Chicago, from which he retired in 1926 as professor emeritus. A fellow of the American College of Surgeons, he was president of the American Ophthalmology Society (1918), the American Academy of Ophthalmology and Otolaryngology (1931), and collaborated on books on ophthalmology. In May, 1935, he received the Leslie Dana gold medal of the St. Louis Society for the Prevention of Blindness which is awarded annually for prominent work toward the conservation of sight.

WILEY, LOUIS B. American newspaper man, died in New York City, Mar. 20, 1935. Born at Hornell, N. Y., May 31, 1869, his family removed to Mt. Sterling, Ky., where he received a private education. He began his newspaper career in 1885 as a reporter. After serving in various capacities on different papers in Mt. Sterling, and Ft. Wayne, Ind., he returned to Rochester, N. Y., where he obtained employment on the *Post Express*. He went into business for himself, publishing and editing, during 1887-93, the *Tidings*, a weekly newspaper. Then he went back to the *Post Express* as business manager, and served in that capacity until 1895. Removing to New York City, he began his long association with the *New York Times* in 1896, and from 1906 was business manager of same. During his régime, in which he was assigned to the advertising and circulation departments, he played an outstanding part in building the *Times* up to its present standard. A founder and former president of the Genesee Society and of the Steuben County Society, he held directorates in many organizations and received the following foreign decorations: Commander of the Legion of Honor (France), Knight Commander of the Hellenic Order of George (Greece), Commander of the Crown of Italy, Officer of the Order of Leopold II of Belgium, Officer of the Order of the Crown of Rumania, etc.

WILLARD, REAR ADMIRAL ARTHUR LEE, U.S.N., RET. American naval officer, died in Washington, D. C., Apr. 7, 1935. Born at Kirksville, Mo., Feb. 21, 1870, he was graduated from the U.S. Naval Academy in 1891 and was commissioned an ensign two years later. He served on the *Machias* in the Spanish-American War and was on the *Mane* during 1903-06. Assigned to the Naval Gun Factory in Washington, D. C., during 1906-08, he next served on board the *Idaho* (1908-10), and from 1910-13, was at the Navy Yard in Washington, D. C. After commanding the *Hancock* during 1913-15, he was named captain of the yard at the Navy Yard, Washington, D. C. He was promoted to the rank of rear admiral in 1924. Six years later he commanded the scouting force of the U.S. Fleet with the temporary rank of vice admiral and before his retirement in 1934, commanded the Fifth Naval District at Hampton Roads.

WILLIAMS, WALTER, died July 29, 1935.

WILLYS, JOHN NORTH, died Aug. 26, 1935.

WILSON, FRANCIS, died Oct. 7, 1935.

WITHERSPOON, HERBERT, died May 10, 1935.

WOODROW, NANCY MANN WADDEL (Mrs. WILSON WOOD-

row). American author, died in New York City, Sept. 7, 1935. Born at Chillicothe, O., she was educated privately and began her career as an assistant editor on the Chillicothe (O.) *Daily News* (1896-97). She was married to James Wilson Woodrow in 1897. Removing to New York in 1900, she has since contributed to magazines, including *Life*, *Smart Set*, *McClure's Magazine*, *Cosmopolitan*, *Good Housekeeping*, and many others. Her publications include: *The Bird of Time* (1907); *The New Missioner* (1907); *The Silver Butterfly* (1909); *The Beauty* (1910); *Sally Salt* (1912); *The Black Pearl* (1912); *The Hornet's Nest* (1917); *Swallowed Up* (1922); *Burned Evidence* (1925); *Come Alone* (1929); *Moonhill Mystery* (1930), and *Pawns of Murder* (1932).

YUILL, I. T. COL. HARRY HOGG. Canadian mining engineer, died in Vancouver, B. C., Sept. 3, 1935. Born in Truro, N. S., July 3, 1886, he was educated at Truro Academy and at McGill University (B.S., 1909, M.Sc., 1910). During the years 1910 to 1915 he served as a mining engineer and manager of mining properties in Western Australia, South Africa, and China. With the outbreak of the World War he went to England, enlisted, and was made a 2d Lieutenant in the Tunnelling Section of the Royal Engineers. At the end of the War he was a lieutenant colonel, and appointed Controller of Mines for the First Army of the British Expeditionary Forces and Advisory Officer to the B.E.F. for production by French coal mines. For his services he was mentioned in dispatches five times, awarded the Military Cross, the Croix de Guerre, the Montenegrin gold medal for bravery, and made a Commander of the Distinguished Service Order. In 1919 he organized the reopening of the Belgian coal mines, and then returned to the practice of his profession as mining engineer. From 1928 he was general manager and representative in British Columbia for the Victoria Syndicate, London.

ZAMMIT, SIR TEMISTOCLE. Maltese chemist, died in Malta, Nov. 2, 1935. Born in 1864, he was educated at the University of Malta and in Paris and London. He was government analyst in the Public Health Department in Malta in 1890, and was curator of Valetta Museum there in 1903. From 1905 he was professor of chemistry at the University, and rector from 1920. He retired, and in 1926 became director of the Museum. He was a member of the Medical Fever Commission (1904-07), and from 1919 was an honorary fellow of the Royal Anthropological Institute of Great Britain and Ireland. He received the honorary degree of Litt.D. from Oxford, and the Mary Kingsley Medal of the Liverpool School of Tropical Medicine in 1920, and was knighted in 1930. He wrote *Malta: The Island and Its History* (1926) and *Prehistoric Malta—The Tarxien Temples*, the last an account of his explorations.

ZIMMERMAN, EUGENE. American political and comic cartoonist, died at Horseheads, N. Y., Mar. 26, 1935. Born in Basle, Switzerland, May 25, 1862, he was brought to America in 1869, and educated in the public schools. Successively, a farmer, a baker, and a sign painter, he showed an aptitude for cartooning and came to the attention of the editor of *Puck*, who employed him. He served on that magazine until 1885 when he became associated with *Judge*, and retired in 1913 to do free lance work. Also, he conducted Zim's Correspondence School of Cartooning, Comic Art, and Caricature. He illustrated books by Bill Nye and James Whitcomb Riley, and also a series of articles done by Nye for *Collier's*. Besides many text books on caricature, he wrote *Caricature, for Students of Comic Art* (1892-93), and in 1926 was elected president of the newly formed American Association of Cartoonists and Caricaturists.

NEGRI SEMBILAN. See **FEDERATED MALAY STATES.**

NEJD. See **ARABIA** under *Kingdom of Saudi Arabia.*

NEON, HEAVY. See **CHEMISTRY.**

NEPAL, ne-pól'. An independent kingdom in the Himalayas between Tibet and British India, under British influence. Area, about 54,000 square miles; estimated population, 5,600,000. Capital, Katmandu (population, about 80,000). The government is a military oligarchy. Reigning sovereign in 1935, Tribhubana Bir Bikram.

NETHERLAND INDIA. A group of large islands in the East Indies forming a colony of the Netherlands. Capital, Batavia, on the island of Java.

Area and Population. The area and population of the islands at the 1930 census is shown in the accompanying table from the U.S. *Foreign Commerce Yearbook 1935.*

NETHERLAND INDIA: AREA AND POPULATION

Group of islands	Area, sq. miles, 1930	Population, 1930	Density per sq. mile
Java and Madoera	51,032	41,718,364	817
Sumatra	164,148	7,677,826	47
Riouw-Lingga	12,235	298,225	24
Bangka	4,611	205,363	45
Billiton	1,866	73,429	39
Borneo:			
West district	56,664	802,447	14
South and east districts	151,621	1,366,214	9
Island of Celebes:			
Celebes	38,786	3,093,251	80
Manado	34,200	1,138,655	33
Molukka Islands and New Guinea	191,682	893,400	5
Timor Archipelago	24,449	1,657,376	68
Bali and Lombok	3,973	1,802,683	454
Total	735,268	60,727,233	83

The total estimated population on Jan. 1, 1934, was 63,500,000. Living births among the natives of Java and Madoera in 1934 numbered 1,166,337; deaths, 785,409. The 1930 population included 241,325 Europeans and 1,232,927 Chinese. The natives are predominantly Mohammedan but there are several million Christians and about 1,000,000 Buddhists. Populations of the chief cities in 1930 (all in Java except as noted) were: Batavia, 533,015; Soerabaja (Surabaya), 341,675; Semarang, 217,796; Soerakarta (Surakarta), 165,484; Bandoeng, 166,815; Djokjakarta (Jogjakarta), 136,649; Malang, 86,646; Palembang (Sumatra), 109,069; Makassar (Celebes), 84,855; Bandjermasin (Borneo), 65,698.

Education. A large proportion of the population is illiterate. School attendance in 1932-33 was Primary, vernacular education, 1,813,286; elementary education, with instruction in the Dutch language, 144,019, higher elementary and secondary, 17,331.

Production. Agriculture is the main occupation. The area under cultivation included 17,388,000 acres in Java and Madoera and 3,418,000 acres in the Outer Islands. Livestock in 1933 included 4,962,629 cattle, 3,293,440 buffaloes, 650,052 horses, 955,000 swine, 1,804,000 sheep, and 4,064,000 goats. Yields of leading crops in 1934 were (in thousands of units): Sugar (Java), 629 metric tons; rubber (exports), 384 metric tons; tea, 162,259 lb.; rice (Java and Madoera), 156,462 bu.; corn (Java and Madoera), 67,387 bu.; groundnuts (Java and Madoera), 327,163 lb.; cassava roots (Java and Madoera), 5976 metric tons; cinchona (European estates only), 18,519 lb.; sisal and agave (exports), 153,599 lb. The output of other crops in 1933 was (in thousands of units): Coffee, 234,666 lb.; tobacco (exports), 107,925 lb.; copra (exports), 1,076,000 lb.; citronella oil (estate production), 3371, lb.; palm oil (estate production), 247,255 lb.; kapok, 45,426 lb.

Mineral production in 1934 was (in 1000 metric tons): Coal, 1017; petroleum, 6042; manganese ore, 11.6; tin (metal content of ore), 20. Gold production in 1934 was 2129 kilograms; silver, 23,524 kilograms. The principal manufactures are refined sugar, petroleum, and rubber; milled rice; and vegetable and animal oils.

Foreign Trade. Imports for consumption in 1934 were valued at 293,657,000 florins (329,378,000 in 1933) and exports of Netherland India merchandise at 526,452,000 florins (470,349,000 in 1933). The comparative figures for 1929 were: Imports, 1,072,139,000 florins; exports, 1,446,181,000 florins. Exports of leading products by volume in 1934 were (in metric tons): Rubber, 384,000;

tobacco, 43,955; fibres, 59,671; tapioca, 145,626; coffee, 81,860; tea, 64,239; copra, 417,155; gum ropal, 10,280; tin, 10,674. Petroleum products exported totaled 37,115,306 bbl. (33,235,875 in 1933). The value of textile imports was 90,626,000 florins, with Japan supplying 67 per cent of the total value. Iron and steel imports were valued at 15,469,000 florins; chemicals, 14,936,000 florins; electrical apparatus, 3,320,000 florins. Japan, the Netherlands, Singapore, the United Kingdom, Germany, and the United States are the chief markets and sources of supply.

Finance. Exclusive of 11,500,000 florins received from the export tax on native rubber, the government in 1934 ran a deficit of 54,100,000 florins, as compared with deficits of 101,700,000 florins in 1933, 140,600,000 florins in 1932, and 145,500,000 florins in 1931. Ordinary budget estimates for 1935 placed receipts at 302,011,000 florins and expenditures at 382,803,000 florins. For 1936 the total estimates (ordinary and extraordinary) were: Receipts, 419,684,000 florins; expenditures, 465,931,000 florins. Although the budget was reduced by 300,000,000 florins in four years through drastic economies, the 1936 budget could be balanced only by imposing new taxes on the production of petroleum and rubber and by a further cut in payrolls and pensions.

The public debt at the close of 1934 totaled 1,509,000,000 florins (1,369,000,000 funded; 140,000,000 floating), compared with 1,512,000,000 florins in 1933. The florin exchanged at an average rate of \$0.4022 in 1932, \$0.5146 in 1933, and \$0.6738 in 1934.

Communications. State and private railways and tramways, extending 4652 miles, during 1933 carried about 75,643,000 passengers. Gross receipts were 54,504,000 florins and operating expenses were 45,144,000 florins. Motor highways aggregated about 36,000 miles on Jan. 1, 1935. The weekly air service between Amsterdam and Batavia was placed on a biweekly schedule in 1935. Air lines connected the principal cities of Java, Sumatra, and Singapore. A total of 13,960 vessels of 29,564,000 net register tons entered the ports of Netherland India during 1933.

Government. Administrative and executive authority is exercised by the Governor-General, assisted by an advisory council of five members and by the Volksraad (assembly). Both the Governor-General and the Council members are nominated by the Queen of the Netherlands. The Assembly of appointed and elected delegates shares limited legislative powers with the Governor-General. It consisted of 30 natives, 25 Netherlanders, and not more than 5 Orientals, such as Chinese and Arabs. Governor-General in 1935, Jhr. Dr. B. C. de Jonge, appointed May 8, 1931.

History. Netherland India failed to benefit from the widespread improvement in world economic conditions during 1935. Instead of the expected upturn, export commodity prices continued their downward trend, the general index for this category reaching the lowest level since prior to 1913. This situation was aggravated by a prolonged drought and the partial failure of crops, particularly in West Java, during the third quarter of the year. The cumulative effect was to reduce native purchasing power and general economic activity to the lowest level of the world economic depression. Monetary returns to native agriculturalists cultivating export crops declined 300 per cent between 1925 and 1933 and fell still further in 1934 and 1935.

The progressive decline in economic activity was not halted by the numerous and drastic "crisis" measures adopted by the government during the year to raise prices and protect local enterprises. These measures took the form of the restriction of production and exports of agricultural commodities, the control of imports by tariffs and quotas to protect local industry and commerce, and the extensive restriction and regulation of industry. The steps taken in 1934 to bar Japanese textiles and other foreign manufactures which competed with imports from the Netherlands also were extended. Illustrative of the regulative measures enacted during the year were those prohibiting the establishment of new dairies or the expansion of existing ones in one administrative district, licensing and controlling the printing trade, and regulating the cigarette industry with respect to the extension of plants, the introduction of new methods, and the use of domestic tobacco in cigarettes.

The additional restriction of tea exports by 5 per cent became effective Apr. 1, 1935. An ordinance empowering the government to regulate and control prices both of imported and domestic articles considered necessities of life, passed the Volksraad July 1 and went into effect August 28. Commencing August 24 a crisis foreign labor ordinance restricted the entrance of European, American, or other foreign intellectual workers. Early in September the Volksraad passed a bill imposing a sliding-scale export duty, for revenue purposes, to become effective Jan. 1, 1936, on rubber produced by estates (European plantations), on "native" rubber produced in regions where the existing special export duty on native rubber was not collected, and on rubber produced outside Netherland Indian customs territory proper.

In his message to the Volksraad of June 15, 1935, the Governor-General emphasized the importance of maintaining a share of imports from countries which are large buyers of Netherland Indian produce by the imposition of quotas and import licenses. He indicated that the government would pursue this policy actively during the crisis period. The budget submitted to the Volksraad the same day anticipated a deficit of 46,000,000 florins, against an estimated deficit of 9,000,000 florins in 1935. On March 28 the Netherlands Government announced a 50,000,000 florin Netherland Indian loan guaranteed by the Netherlands and bearing 3½ per cent interest. Of the total amount 20,000,000 florins was offered to the public, but only 3,000,000 florins were publicly subscribed.

The Japanese-Netherland Indian conference for the regulation of mutual trade relations, which had adjourned at Batavia in December, 1934, without accomplishment, was resumed at Kobe, Japan, on Jan. 25, 1935. The object of this conference was to regulate shipping between Japan and Netherland India but a dispute over the language to be used during the conference led to the collapse of the negotiations in March.

NETHERLANDS, THE. A constitutional monarchy of northwestern Europe. Capital, Amsterdam. Seat of the government, The Hague. Sovereign in 1935, Queen Wilhelmina, who succeeded to the throne Nov. 23, 1890.

Area and Population. With an area of 13,481 square miles of land and water, the Netherlands had an estimated population on Jan. 1, 1935, of 8,400,000 (7,435,565 at the 1930 census). In 1930 94 per cent of the population lived in urban communities of 2000 or more. Living births in 1934 numbered 172,214; deaths, 70,161; mar-

riages, 60,631. The chief cities, with their estimated populations in 1934, were: Amsterdam, 778,442; Rotterdam, 587,897; The Hague ('s Gravenhage), 469,161; Utrecht, 159,896; Haarlem, 126,740; Groningen, 111,240; Eindhoven, 96,863; Nijmegen, 87,808; Tilburg, 84,987; Arnhem, 82,363; Leiden, 72,414.

Education. Primary education is free and compulsory and there is practically no illiteracy. The primary school enrollment in 1933 was 1,267,934; secondary, 48,250; preparatory, 21,178; university, 10,678. There are four public universities (Leiden, Groningen, Amsterdam, and Utrecht) and four private and technical universities.

Production. The 1930 census showed 39 per cent of the working population engaged in industry, 20 per cent in agriculture, 12 per cent in commerce, and 9 per cent in transportation. In 1933 2,156,000 acres, or 25 per cent of the total area, was arable; 3,275,000 acres were meadow and pasture; 630,000 acres were devoted to woods and forests, and 293,000 acres to orchards and truck gardens. Livestock in 1934 included 2,627,000 cattle and 1,750,000 swine. The butter output in 1934 was 199,075,000 lb.; cheese, 256,615,000 lb. The 1934 crops were: Wheat, 17,196,000 bu.; rye, 16,291,000 bu.; barley, 4,546,000 bu.; oats, 19,803,000 bu.; potatoes, 91,490,000 bu.; sugar beets, 1,786,000 metric tons; beet sugar (1934-35), 232,000 metric tons; flax, 9,921,000 lb.

The production of mines and factories in 1934 included: Coal, 12,341,000 metric tons; lignite, 92,000 metric tons; briquets, 1,122,000 metric tons; cotton yarn, 52,910,000 lb.; boots and shoes, 13,200,000 pairs; margarine, 138,890,000 lb.; cocoa powder, 15,432,000 lb.; cocoa butter, 33,069,000 lb.; potato flour, 308,644,000 lb.; bicycles, 416,000; shipping tonnage launched, 47,000. Cotton and wool textiles, machinery, shipbuilding, shoes, iron and steel, cocoa and chocolate, and paper were the leading manufactures. The fisheries in 1934 yielded 212,400 metric tons of fish, valued at 16,900,000 florins.

Foreign Trade. Imports for consumption in 1934 were valued at 1,038,164,000 florins (1,209,229,000 in 1933) and exports of Netherland products at 811,814,000 florins (725,841,000 in 1933). Of the 1934 imports, Germany supplied 28.6 per cent; Belgium, 10.4 per cent; United Kingdom, 9.4 per cent; United States, 6.7 per cent; Netherland India, 5.6 per cent. Germany purchased 24.8 per cent of the exports; United Kingdom, 19.1 per cent; Belgium, 11.5 per cent; France, 8.1 per cent; Netherland India, 4.3 per cent. The chief imports, in order of value, were iron and steel, machinery, wood, textile fabrics; coal, coke, and briquets; corn, and chemicals. The leading exports, by value, were radio apparatus; coal, coke, and briquets; meat, game, and poultry; vegetable oils, cheese, condensed milk, eggs, textiles, and fresh vegetables.

In 1935 imports totaled 935,933,000 florins; exports, 675,104,000 florins. United States statistics showed imports from the Netherlands in 1935 of \$40,664,450 (\$28,440,070 in 1934) and exports to the Netherlands of \$48,539,865 (\$50,967,793 in 1934).

Finance. According to preliminary returns, the budget showed a deficit of 230,500,000 florins in 1933 (receipts, 762,000,000; expenditures, 993,500,000) and another deficit of 94,000,000 in 1934 (receipts, 848,100,000; expenditures, 942,100,000). The estimates for 1935 placed receipts at 963,300,000 florins and expenditures at 1,004,300,000 florins. The public debt on Jan. 1, 1935, totaled 3,362,303,000 florins (funded, 2,700,306,000; floating, 661,997,000), compared with 3,372,242,000 florins on

Jan. 1, 1934. The florin (guilder), par \$0.6806 U.S. currency in 1935, exchanged at an average of \$0.4029 in 1932, \$0.5172 in 1933, and \$0.6738 in 1934.

Communications. The Dutch railways, all owned by two private companies in which the government owned a controlling interest, had 2250 miles of line in 1933, which carried 50,113,000 passengers and 18,103,000 metric tons of freight. The gross receipts totaled 122,438,000 florins. There were also 4660 miles of navigable rivers and canals, about 3000 miles of highways, and air lines radiating from Amsterdam to London, Brussels, Paris, Hamburg, Malmo, and Batavia (Netherland India). Another air line connects Rotterdam and Berlin. The net register tonnage of vessels entering Dutch ports in the overseas trade with cargo in 1934 was 23,451,000 (22,135,000 in 1933). The Dutch merchant marine on June 30, 1935, aggregated 2,558,400 gross tons. Merchandise passing through Dutch ports in the direct and transit trade in 1935 totaled 77,600,000 tons.

Government. Executive power is vested in the sovereign and legislative power conjointly in the sovereign and the States-General (parliament). There is an Upper Chamber of 50 members elected by the Provincial States for six years and a Lower Chamber of 100 members, elected by direct suffrage for four years. Premier at the beginning of 1935, Dr. Hendrik Colijn, appointed May 24, 1933.

History. Under the guidance of its forceful Prime Minister, Dr. Hendrik Colijn, the Netherlands Government held stubbornly to its deflationary policy during 1935 despite the growing seriousness of the economic depression and a severe financial and political crisis. The general index of industrial production (Base 1929 equals 100) declined to 66.3 in 1935 from 69.8 in 1934. The average number of registered unemployed rose to a record peak of 384,691 for 1935 from 332,772 in 1934. Agriculture closed the year in definitely worse condition than in 1934. The value of agricultural exports in 1935 was estimated to be 400,000,000 florins less than in 1929, while the 1935 decline in exports of primary farm products was 15,000,000 florins, or 8 per cent, below the 1934 level. Foreign trade in 1935 had declined 28 per cent in volume and almost 64 per cent in value from the average for the years 1926-30. As compared with 1934, the 1935 imports fell 10 per cent in value and the exports 5 per cent.

The deepening of the depression was reflected in the decline in the vote polled by the government coalition in the Provincial Council elections held in 10 of the 11 Provinces on Apr. 18, 1935. The government parties secured 57.5 per cent of the votes cast, as against 61.9 per cent in 1933 and 67 per cent in 1931. The Liberals and Clerical Protestants suffered the heaviest losses. The National Socialists, favoring a Fascist dictatorship and a corporative state, made their definite entrance into the political arena by winning nearly 8 per cent of the total vote. The newly elected Provincial Councils in turn elected one-half of the members of the Upper Chamber of Parliament. Little change in the standing of the major parties in the Upper Chamber occurred. The Liberals lost one seat, and the National Socialists won two.

The Belgian financial crisis culminating in the abandonment of the gold standard and the devaluation of the belga on April 1 inaugurated a financial crisis in the Netherlands which continued intermittently until a definite restoration of confidence became evident in the last months of the year. A speculative raid on the florin, accompanied by

depreciation of its exchange value and a heavy outflow of gold, forced the Netherlands Bank gradually to raise its discount rate from 2½ to 4½ per cent during April. After a period of calm, the financial crisis was renewed as a result of the difficulties of the Swiss franc and the more serious threat of devaluation of the French franc. By July the outflow of gold was again in full swing, causing the Netherlands Bank to raise its discount rate to 6 per cent. It was accompanied by a significant flight of Dutch capital, which was transferred mainly into sterling and dollar accounts.

To restore the budget equilibrium and thereby renew confidence in the florin Premier Colijn proposed to make additional cuts in wages and salaries of government employees. At the same time he urged the extension of his deflationary programme to include a reduction of interest rates on loans and mortgages. These measures aroused further discontent in the Netherlands, particularly among government employees and wage earners. The Catholic party, fearing that its hold on Catholic workers would be undermined if it stood by the government on these measures, withdrew its support from the cabinet. On July 27 the Premier tendered his resignation, as he now lacked a majority in Parliament. The Queen requested Dr. P. J. M. Aalberse, parliamentary leader of the Catholic party, to form a new government. He was unable to secure the necessary support of other parties and accordingly Dr. Colijn was again called upon to head the government. The effect of the crisis was to enhance Premier Colijn's prestige and power. He was now able to force his deflationary measures upon the Catholics and other parties forming his government, even when they did not fully agree with him.

Dr. Colijn's triumph also produced a partial restoration of confidence in the florin. However, pressure for devaluation gradually increased and uncertainty as to the future of the florin raised a major barrier to the restoration of normal business activity. On September 16 the Netherlands Bank was again obliged to raise its discount rate to 6 per cent to check a new drain on its gold reserves. Premier Colijn continued doggedly to oppose devaluation, however. The Queen's address to the newly assembled Parliament on September 17 called for new deflationary measures in the form of increased taxation and governmental economies. At the same time the government pledged itself to provide adequate relief for the distressed and to extend its public works programme to absorb the unemployed. During the last quarter of the year the marked improvement in economic conditions in other countries aided the government's struggle to defend the florin. About 100,000,000 florins of expatriated gold returned to the Netherlands and at the close of the year business sentiment was more hopeful than at any time since the depression began.

Meanwhile the government had been making steady efforts to adjust the economic system of the Netherlands to the far-reaching changes required by the loss of important export markets for Dutch agricultural products in Great Britain and Germany and the continued restriction of foreign markets for Dutch manufactures. For several years agriculture had been heavily subsidized and in 1935 this policy was continued. The most significant trend, however, was the government-sponsored movement for further industrialization of the country. A number of factories were established with state funds to manufacture articles formerly

imported. The government hoped by these measures to absorb part of the unemployed. At the same time it aided manufacturers to eliminate unnecessary competition within the home market. A law was enacted providing that certain production and price control agreements would be obligatory for a whole industry when a majority of the individual manufacturers approved them.

To prevent the threatened bankruptcy of national shipping companies, the government extended non-interest-bearing credits aggregating 8,200,000 florins to support seagoing ships in actual operation. The advantage which Antwerp obtained over Dutch ports through the devaluation of the belga was counterbalanced by a reduction of Dutch pilot dues to 11 per cent of the 1933 rates.

A distinctly encouraging development was the signing at Washington on Dec. 20, 1935, of a reciprocal Netherland-American trade agreement, to become effective Feb. 1, 1936. The United States lowered its tariff duties on 41 Netherland products and agreed to keep a wide variety of other products on its free list. The chief concession made by the Netherlands was the agreement to buy 5 per cent of its domestic consumption of milling wheat or flour from the United States, provided the price and quality were approximately equal to other foreign wheat. The Netherlands also agreed not to raise tariff rates on many American products and to keep certain others on the free list. Special Dutch import monopoly fees were lowered on some American commodities, and enlarged quotas were granted for a number of American manufactures. On June 12 the Netherland Government signed a new transfer agreement with Germany which became effective July 1.

See NETHERLAND INDIA under *History*.

NEURON LESIONS, UPPER MOTOR.

See MEDICINE AND SURGERY

NEUTRALITY. See INTERNATIONAL LAW; UNITED STATES

NEVADA. Population. On Apr. 1, 1930 (Fifteenth Census), 91,058; July 1, 1934 (latest Federal estimate), 94,000; 1920 (Census), 77,407. Carson City, the capital, had (1930) 1596 inhabitants; Reno, 18,529.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu	Value
Hay (tame) . .	1935	191,000	352,000*	\$2,006,000
	1934	166,000	201,000*	1,729,000
Wheat	1935	12,000	305,000	265,000
	1934	12,000	270,000	222,000

* Tons.

Mineral Production. The mines' yearly production of gold, silver, copper, lead, and zinc, forming much the greater part of all mineral production, by value, rose to \$12,186,234 for 1934, from \$5,452,300 for 1933. The chief components of the total for 1934 were: gold, 143,800 fine oz., in value \$5,025,810; silver, 2,850,000 oz., \$1,842,424; copper, 41,750,000 lb., \$3,340,000; lead, 21,500,000 lb., \$795,500; zinc, 27,500,000 lb., \$1,182,500.

Education. The Legislature having allotted \$100,000 (for 1935 and 1936), out of the receipts from liquor licenses, to the public schools, these were able in many cases, according to the *Journal* of the National Education Association, to augment curtailed salaries and yearly sessions.

Legislation. A State liquor law was enacted, providing a system of State revenue stamps through which was to be obtained a tax on sales

of liquor. The law went into effect on May 1, 1935.

Political and Other Events. Nevada ceased with September to receive grants from the FERA for the support of destitute unemployed persons. It had received \$2,330,618 in such grants in 1934. Economic improvement was mainly responsible for the decline in the need for public support. Sustained and expanding activity in the mining of silver and gold, particularly of silver, stimulated by the Federal bidding up of the price of the metal, was the main cause of this improvement. The raising of livestock was favored by spring rains and better markets. See **DUST STORMS**; **FLOODS**.

Officers. The chief officers of the State, serving in 1935, were: Governor, Richard Kirman, Sr.; Lieutenant-Governor, Fred S. Alward; Secretary of State, W. G. Greathouse; Treasurer, Dan W. Franks; Comptroller, Henry C. Schmidt; Attorney-General, Gray Mashburn; Superintendent of Public Instruction, Chauncey W. Smith.

Judiciary. Supreme Court: Chief Justice, Edward A. Ducker; Associate Justices, Ben W. Coleman, E. J. L. Taber.

NEVADA, UNIVERSITY OF. A coeducational State institution of higher education in Reno, Nev., founded in 1874. There was an enrollment of 973 students for the autumn term of 1935. The faculty included 78 members. The productive funds amounted to \$357,888, and the income for the year to \$576,235. The library contained 58,500 volumes. President, Walter E. Clark, Ph.D., LL.D.

NEW BRUNSWICK. A Province of Canada. Area, 27,985 sq. miles; population (1935 est.), 429,000 compared with 408,219 (1931 census). During 1934, there were 10,136 births, 4656 deaths, and 3040 marriages. Chief cities (with 1931 populations): Saint John (47,514), Moncton (20,689), Fredericton, the capital (8830). For the school term ended June 30, 1935, there were 1489 schools with a total enrollment of 84,536 students of whom 6043 were high school students.

Production. The estimated value of field crops for 1935 was \$15,509,000 (\$14,961,000 in 1934) of which hay and clover (716,000 tons) accounted for \$7,740,000; potatoes (221,200 tons), \$3,230,000; oats (6,238,000 bu.), \$2,745,000. Livestock in 1934: 226,700 cattle, 113,900 sheep, 70,800 swine, and 51,200 horses. The fish catch for 1934 was valued at \$3,679,970 of which sardines represented \$1,038,189; lobsters, \$812,045. Fur production (1933-34): 59,581 pelts valued at \$661,094 of which silver fox (13,962 pelts) represented \$514,213. Mineral production (1934) was valued at \$2,156,151 of which coal (314,750 tons) accounted for \$1,026,343; natural gas (625,601 M cu. ft.), \$306,005. Mineral production (1935): coal (333,559 tons), \$1,095,255; natural gas (608,600 M cu. ft.). During 1933, from the 800 factories, with 11,994 workers, the value of products was \$24,354,723 net.

Government. For the fiscal year ended Oct. 31, 1935, revenue amounted to \$6,342,491; expenditure, \$7,045,608; net public debt, \$53,351,139. Government was vested in a lieutenant-governor and a legislative assembly of 48 members (43 Liberals and 5 Conservatives were elected at the Provincial general election of June 27, 1935). In the Dominion Parliament the Province was represented by 10 Senators and 10 members in the House of Commons (9 Liberals and 1 Conservative were elected at the Dominion General Election held on Oct. 14, 1935). Lieutenant-Governor, Col. M. MacLaren; Premier, A. A. Dysart (Liberal). See **CANADA** under *History*.

NEW CALEDONIA. A colony belonging to France, consisting of the island of New Caledonia and the following dependencies: Isle of Pines, Wallis Archipelago, Futuna and Alofi, Loyalty Islands, and Huon Islands. Total area, 8548 sq. miles; total population (1931 census), 62,919. Nouméa (capital) on the island of New Caledonia, had 10,708 inhabitants.

Production and Trade. Coffee, copra, cotton, manioc, maize, tobacco, pineapples, nickel, chrome, cobalt, manganese, and iron were the chief products. The blast furnaces produced 5978 tons of nickel matte valued at 29,665,000 francs in 1933; chrome ore produced in the same year amounted to 50,100 metric tons. Livestock in the colony included 100,000 cattle, 5000 sheep, 8000 goats, 9000 horses, and 7000 pigs. In 1933, imports (consisting mainly of wine, coal, flour, and rice) were valued at 56,999,000 francs; exports, 47,999,000 francs (franc averaged \$0.0501 for 1933).

Government. The local budget for 1933 was balanced at 29,579,175 francs. The colony was administered by a governor assisted by a privy council, and an elective council-general of 15 members. Governor, B. Siaolous (appointed in 1933).

"NEW DEAL." See **BELGIUM, CANADA, GREAT BRITAIN, SWITZERLAND** under *History*; **UNITED STATES** under *Administration*.

NEWFOUNDLAND, nü'fün(d)-län'd'. A large island at the entrance to the Gulf of St. Lawrence, forming, with Labrador (q.v.), a British colony. Capital, St. John's.

Area and Population. Newfoundland, excluding Labrador, has an area of 42,734 square miles and a population estimated on Jan. 1, 1934, at 285,863 (259,259 at the 1921 census). The estimated population of St. John's in 1933 was 43,792, and that of other towns in 1921 was Harbour Grace, 3825; Bonavista, 4052; Grand Falls, 3769; Carbonear, 3320. In 1933 there were 97,509 Roman Catholics, 93,904 Anglicans, 79,195 members of the United (Protestant) Church, 1911 Presbyterians, 14,397 adherents of the Salvation Army, and 3358 of other denominations. Schools are conducted by religious denominations, there being 1133 schools, with 55,267 pupils, in 1932-33. Illiteracy is estimated at between 7 and 10 per cent.

Production. Fishing, the main occupation, is supplemented by farming, mining, manufacturing, and lumbering. The codfisheries in 1934 yielded 144,480,000 lb. of fish (the average catch during 1926-34 was 132,149,000 lb.). The 1935 seal catch was 143,031 (227,390 valued at \$324,792 in 1934). Hay, potatoes, turnips, and cabbage are the chief crops. Livestock in 1934 numbered 25,500 cattle, 7000 swine, 10,000 goats, 58,000 sheep, and 14,100 horses. The output of iron ore in 1934 was 728,000 short tons, valued at \$1,796,837; of lead and zinc concentrates, 496,000 short tons valued at \$1,841,716, of newsprint (in 1933-34), 259,000 short tons, valued at \$11,580,345.

Foreign Trade. For the year ended June 30, 1935, imports were valued at \$19,240,425 (\$16,305,562 in 1933-34) and exports were \$27,229,125 (\$26,791,503 in 1933-34). The chief sources of imports were: Canada, \$7,154,731; United States, \$5,700,234; United Kingdom, \$4,683,940. The distribution of exports was: To the United Kingdom, \$10,316,579; United States, \$5,171,646; Canada, \$2,183,624. Flour, textiles, coal, hardware, and provisions were the chief imports and codfish, cod and seal oil, wood pulp, paper, iron pyrites, seal skins were the leading exports.

Finance. The budget estimates for the fiscal year beginning July 1, 1935, balanced at \$11,896,698 (Canadian), with the aid of a subvention of £369,680 from the British Government. Actual returns for 1934-35 were: Receipts, \$9,580,749 (\$8,518,946 in 1933-34); expenditures, \$10,600,000 (\$10,166,812). The public debt on June 30, 1934, totaled £19,319,000. On June 30, 1935, it was £20,086,750. The unit of currency is the Newfoundland gold dollar, which in 1935 was equivalent to the Canadian dollar.

Communications. The Newfoundland railways in 1934 had 834 miles of line (government line, 750 miles). In that year they carried 127,397 passengers and 386,112 long tons of freight. About 880 miles of highway were passable to motor cars. A total of 1386 vessels of 1,150,510 net register tons capacity entered the ports during 1933-34 (1364 vessels of 1,050,681 tons in 1932-33).

Government. As a result of a grave financial and economic crisis, the Newfoundland and British parliaments in 1933 passed legislation through which Newfoundland temporarily relinquished its status as a self-governing dominion and became once again a British Crown Colony, governed by a commission of 6 members (3 from Newfoundland and 3 from the United Kingdom). The Commission, which assumed office Feb. 16, 1934, consisted of Sir John Hope Simpson (in charge of the department of Natural Resources), Thomas Lodge (Public Utilities), E. N. R. Trentham (Finance), all Britishers; and F. C. Alderdice (Home Affairs), William R. Howley (Justice), and J. C. Puddeste (Public Health), all Newfoundlanders. Governor and Commander-in-Chief in 1935, Sir David Murray Anderson, who assumed office Jan. 23, 1933. The appointment of Admiral Sir Humphrey Thomas Walwyn to succeed Sir David Murray Anderson, effective in January, 1936, was announced Sept. 30, 1935.

History. The commission of three Newfoundlanders and three Britishers which assumed charge of the government of Newfoundland in February, 1934, made substantial headway during that year in its effort to rescue the island from an acute economic and financial crisis (see 1934 YEAR BOOK, p. 513). In 1935, however, there was a definite slackening of the rate of recovery, with resultant discontent and a demand for restoration of the self-government voluntarily abdicated in 1933.

A report issued by the Commission in May, 1935, reported a marked increase in revenues, an increase in factory employment, and a reduction of the number on relief. Conversion operations carried out with the aid of the British Government had reduced the annual interest burden by 40 per cent. But even with this saving, rising revenues, and a subsidy from the British Treasury, the Commission had difficulty in balancing the budget. In 1935 the increase of foreign tariffs and quotas on fish and fish products further restricted the income of the islanders. The unprofitable shore codfishery resulted in a larger public relief roll during the winter of 1935-36. The storm of August 25, which cost 31 lives and wrecked 10 schooners and 150 fishing boats, was a further blow to the fishing industry.

In an effort to increase prices and revive the herring industry, the Commission restricted packing of the 1935 catch to the average production of the preceding three years. It also provided better credit and other facilities to fishermen. To solve the problem of permanent unemployment in St. John's, the settlement of part of the surplus laborers on the land was undertaken. At the same time the or-

ganization of relief was improved and a more varied diet was provided which eliminated the beri-beri prevalent among persons on relief during 1934.

Most of the Commission's schemes for rehabilitation of the island were of a long-range character, requiring several years to become effective. Certain elements of the population, led by former Finance Minister P. J. Cashin, were dissatisfied with the progress made, however, and at a public meeting in St. John's on October 30 they adopted a resolution calling for the restoration of self-government. The resolution was discussed before the British House of Commons in December. The Under-Secretary for the Dominions told the House that the complaint against the Commission was "not founded on any substantial basis" and that no action would be taken regarding it. The appointment of Vice Admiral Sir Humphrey Thomas Walwyn to succeed Sir David Murray Anderson as Governor and Commander-in-Chief of Newfoundland early in 1936 was announced in December, 1935. Sir David was appointed Governor of New South Wales.

NEW GUINEA, gin'i. The name of an island in the East Indies, and also of those territories in the western Pacific Ocean (including part of the island of New Guinea) mandated to Australia by the League of Nations. Total area of the island of New Guinea, 308,000 sq. miles; population, 1,000,000. See NETHERLAND INDIA; NEW GUINEA, TERRITORY OF; PAPUA, TERRITORY OF.

NEW GUINEA, TERRITORY OF. The territory administered by Australia under mandate of the League of Nations, comprising North-East New Guinea (The Mainland), 69,700 sq. miles; Bismarck Archipelago (consisting of New Britain, New Ireland, Lavongai, Admiralty Islands), 19,200 sq. miles; and the northern Solomon Islands (consisting of Bougainville, Buka, and adjacent small islands), 4100 sq. miles. Total area, 93,000 sq. miles; total population (June 30, 1934), 712,377 including 5453 non-indigenous, 456,924 enumerated natives, and an estimate of 250,000 natives in areas without government supervision. Rabaul (on New Britain) is the capital.

Production and Trade. The area under cultivation on June 30, 1933 (exclusive of native plantations) totaled 219,393 acres of which 211,719 were devoted to coconuts. Coffee, kapok, cacao, tobacco, native foods, and tropical fruits were also grown. Mining is confined to gold (257,511 oz. exported in 1933-34). For 1933-34, total imports (less specie) amounted to £932,731; total exports, £1,766,198 of which the main items were gold (£1,367,616), copra (£283,329), desiccated coconut (£81,562), and trochus, trepang, etc. (£24,882). Ships entered and cleared during 1933-34 aggregated 559,299 net tons.

Government. Revenue for 1933-34 totaled £350,358; expenditure, £348,817; public debt, £55,777. The territory was under an administrator aided by an executive council, and a legislative council empowered to make ordinances. Administrator in 1935, Brig. Gen. W. R. McNicoll. See EXPLORATION.

NEW HAMPSHIRE. Population. On Apr. 1, 1930 (Fifteenth Census), 465,293; July 1, 1934 (latest Federal estimate), 470,000; 1920 (Census), 443,083. Manchester (1930) had 76,834 inhabitants; Concord, the capital, 25,228.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	388,000	416,000*	\$5,325,000
	1934	382,000	375,000*	6,562,000
Potatoes	1935	10,000	1,200,000	900,000
	1934	10,000	1,850,000	999,000
Corn	1935	17,000	697,000	558,000
	1934	16,000	656,000	643,000

* Tons.

Education. The number of the State's inhabitants between the ages of five and sixteen years on Oct. 1, 1934, was reckoned as 91,086. In the year ending with June 30, 1935, there were enrolled in the public schools 78,689 pupils. Of these, 57,970 were in the elementary grades; those in high schools numbered 19,502; and there were 1217 pupils in evening schools. The expenditures of the year for public-school education totaled \$7,073,824, as against \$6,719,579 for the year previous. The salaries of teachers, for the year, averaged \$1935 among men in the secondary classes, \$1398 among men in the elementary classes, and \$1390 and \$1094 respectively for women in the corresponding groups.

Charities and Corrections. The Legislature's course in discontinuing the State Board of Public Welfare and creating a paid State Board of Welfare and Relief had the effect of uniting the administration of the State's ordinary activities for the care and custody of persons and its work in the field of support for the destitute unemployed. The new board was a paid body of three members, provided with a staff. To perform its double task it operated through two divisions. Of these, the Division of Welfare attended to the supervision of neglected, delinquent, and defective children, the inspection of State and other charitable and correctional institutions, mothers' aid, education and employment for the blind, and aid for the tubercular; the Division of Relief reimbursed towns and counties for half of their expenditure on poor relief.

The State provided care or custody for individuals in the following institutions: New Hampshire State Hospital (mental disorders), at Concord; Laconia State School (feeble-minded children), Laconia; New Hampshire Industrial School (juvenile delinquents), Manchester; State Prison, Concord; New Hampshire Soldiers' Home, Tilton; State Sanatorium (tuberculosis), Glencliff. A State appropriation provided means for putting in other places of treatment tubercular patients whom the Sanatorium could not take. Prison industries produced the State's automobile-license plates, did stone-cutting, and performed the State's printing.

Legislation. The regular session of the Legislature created a system of compulsory insurance against unemployment. Under this system persons losing employment were to receive determined sums during a period of idleness, out of a fund to which both employees and employers were required to contribute. The system applied to all industrial firms employing ten or more persons apiece and to all employees of such firms whose rate of pay did not exceed \$2500 a year. The plan was designed to conform with the qualifications for Federal subvention to State insurance against unemployment, under the Social Security Act (see UNITED STATES; Congress). A Board of Welfare and Relief was created, to administer both emergency aid and ordinary welfare.

Political and Other Events. In the expectation that plans under the Federal system of "work relief" would suffice for the support of the remain-

ing persons otherwise unemployed and employable, but lacking livelihood, the FERA stopped its monthly grants to the State at the end of September. Public support for the needy unemployed in 1934 had cost \$4,240,255, of which the FERA had paid nearly 60 per cent, the State government paying about nine-tenths of the remainder. The whole cost came to somewhat above \$9 per capita of the population, or approximately three-fourths of the corresponding rate for the Nation. Declining revenue and higher expenditure combined to cause the State a cash deficit of \$933,675 at the end of the fiscal year 1935. State aid to the needy unemployed was suspended in December.

The foremost industrial firm in the State, the Amoskeag cotton manufactory, which had formerly employed as many as 12,000 persons, suspended operations at Manchester for a great part of the year. In the apprehension that the long-established enterprise might be liquidated, Governor Bridges, August 9, appointed a committee to report on the situation. The committee's report, given out early in November, declared the State liable to suffer hardship in case of the loss of employment to the inhabitants involved; it attributed the difficulties of the mills to matters largely beyond the control of the Company and of the State, but it recommended the repeal of the State's tax on stock in trade, a tax deemed a handicap to manufacturing, and suggested a conference between Amoskeag's management and employees.

New Hampshire ratified in May the compact of New England States, New York, and Pennsylvania, executed in 1934, to provide uniform legislation as to minimum wages. As Massachusetts had ratified in 1934 the compact became valid for the two ratifying parties, except for Federal approval. See MINIMUM WAGE.

Officers. The chief officers of the State, serving in 1935, were: Governor, H. Styles Bridges; Secretary of State, Enoch D. Fuller; Treasurer, Charles T. Patten; Attorney-General, Francis W. Johnston (died October 14) and Thomas P. Cheney (thereafter).

Judiciary. Supreme Court: Chief Justice, John E. Allen, Associate Justices, Thomas L. Marble, Oliver W. Branch, Peter Woodbury, Elwin L. Page.

NEW HAMPSHIRE, UNIVERSITY OF. A co-educational State institution of higher learning at Durham, N. H., founded in 1866 in Hanover, N. H., and transferred to Durham in 1893. The 1935-36 enrollment was 1594, of whom 1134 were men and 460 women. The summer session had a registration of 343. The faculty and research and extension staff totaled 267. The endowment amounted to \$1,228,934 and the income for the year was \$1,339,265. A change in the division of the instructional year to semester basis was authorized by trustees to become effective in September, 1936. A Bureau of Appointments was established to cover all types of after-graduation employment and non-University undergraduate employment. The Alumni Fund plan of annual donations by graduates was established. A course in practical citizenship, including weekly lectures by State and national officers and leaders was added to the curriculum, and the department of sociology reorganized. The enrollment of New Hampshire non-residents in the law department was permitted temporarily. The library contained 82,165 volumes. President, Edward Morgan Lewis, LL.D., Litt.D.

NEW HEBRIDES, hēb'ri-dēz. A British-French condominium comprising a group of is-

lands in the South Pacific. Espiritu Santo, Malekula, Efate, Ambrym, Erromanga, Epi, Aoba, Pentecost, Maeovo, Gaua, Vanua Lava were the main islands. Total area, 5700 sq. miles; population, about 50,000 natives and 2318 non-natives. Vila, the capital, had 1200 inhabitants.

Copra, cacao, coffee, cotton, maize, sulphur, and vanilla were the main products. In 1934, total imports were valued at £75,993; total exports, £49,933; revenue, £10,719; expenditure, £23,362. Executive power was vested in a British Resident Commissioner (who was under the British High Commissioner stationed at Suva, Fiji Islands) and a French Resident Commissioner (subordinate to the French High Commissioner stationed at Nouméa, New Caledonia).

NEW JERSEY. Population. On Apr. 1, 1930 (Fifteenth Census), 4,041,334; July 1, 1934 (latest Federal estimate), 4,231,000; 1920 (Census), 3,155,900. Newark (1930) had 442,337 inhabitants; Jersey City, 316,715; Paterson, 138,513; Trenton, the capital, 123,356.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	208,000	339,000*	\$4,576,000
	1934	215,000	397,000*	6,352,000
Corn	1935	180,000	8,190,000	5,733,000
	1934	166,000	7,138,000	6,210,000
Potatoes	1935	50,000	9,750,000	4,388,000
	1934	50,000	9,050,000	4,796,000
Apples	1935	.....	4,200,000	3,738,000
	1934	.....	2,070,000	2,463,000
Peaches	1935	.....	800,000	1,040,000
	1934	.....	22,000	52,000
Sweet potatoes . .	1935	14,000	2,100,000	1,575,000
	1934	13,000	2,015,000	1,894,000

* Tons.

Mineral Production. Mines in the State produced, in 1934, ore containing 76,553 tons of zinc, as against 75,125 tons for 1933. The zinc obtained from the ore mined in 1934 had a total value of \$8,772,200. The minor production of iron ore in the State's northern area continued, rising to 138,685 gross tons for 1934, from 73,144 for 1933.

Education. There were enrolled in the public schools of the State, in the academic year 1934-35, 809,926 pupils. Of this total 40,546 were in kindergartens, 540,996 in elementary schools, 49,286 in junior high schools, 34,754 in senior high schools, 133,262 in four-year high schools, 1382 in post-graduate courses, and 9700 in special classes. Except for the elementary and kindergarten enrollments, the totals by groups exceeded those for the year before. The year's expenditures, exclusive of outlays, for education in the public schools totaled \$98,174,439, which included \$19,760,240 for service of debt. The year's capital outlays for public schools totaled \$1,944,602. The salaries of the 27,519 teachers, for the year, averaged \$1813.05, which was 15.9 per cent below the average for the year 1931-32.

High schools continued to encounter demand among unemployed alumni for postgraduate instruction. Effort was made in the northern part of the State, with aid from Federal funds, to offer particular provision for this group. Six counties, Essex, Middlesex, Monmouth, Morris, Passaic, and Union, maintained emergency junior colleges.

Charities and Corrections. A strongly centralized direction of public activity in the care and custody of persons, under the system in force in 1935, was vested in the Department of Institutions and Agencies. A Board of Control, composed of

nine appointed members, headed the Department, and a Commissioner (William J. Ellis), its appointee, was its chief executive officer. The Board appointed boards of managers for State institutions; coordinated institutional and other public activities in its field; established the administrative policies therein; supervised the management of the State institutions; prepared their budgetary requests; afforded them the service of a staff of experts; inspected private, county, and municipal institutions; ruled on transfers of persons in State institutions; supervised those paroled from State correctional custody; conducted institutional industries producing for the State's use; and administered State relief for the aged.

The State institutions within the Department and their populations of Oct. 31, 1935, were: State hospitals for mental patients, at Greystone Park (5020), Trenton (2722), and Marlboro (1700); for the feeble-minded, the State School (females, 1362) at Vineland, State Colony (males, 795) at New Lisbon, State Colony (males, 637) at Woodbine, and North Jersey Training School (females, 549) at Totowa; State Village for Epileptics (1413) at Skillman; Sanatorium for Tuberculous Diseases (463), Glen Gardner; State Prison (1246), Trenton; State Prison Farms at Leesburg (229) and at Bordentown (202); reformatories at Rahway (males, 752), Annandale (males, 412), and Clinton (females, 244); for juvenile delinquents, the State Home for Boys (524) at Jamesburg, and State Home for Girls (248), at Trenton; Home for Disabled Soldiers (53), Menlo Park; Home for Disabled Soldiers, Sailors, Marines, and Their Wives and Widows (162), Vineland. The State Board of Children's Guardians had charge of 28,642 cases. Aid to the blind was rendered by a State Commission for the Blind.

Legislation. A tax of 2 per cent on sales at retail, payable by the purchaser through the seller, was imposed. Its application extended to food, with the exception of milk; it was payable approximately to the nearest cent, and went into effect on July 1. This tax was the session's foremost subject of strife. Governor Hoffman sought it as needful to raising the means for meeting the State's share of the cost of the public support of the destitute unemployed; a strong division of his own fellow-Republicans forming the majorities in the Legislature opposed it. To enable the State to free funds for early use the State Sinking Fund Commission was authorized to market at private sale \$2,500,000 bonds of the Port of New York Authority that it held, for which it had failed to obtain bids by the ordinary method. The Governor was authorized to borrow from State funds at the rate of \$2,000,000 a month in order to tide the State over the immediate needs for money to help support the unemployed.

The existence of the State Milk-Control Board was extended for two years and its membership was increased. The Highway Commission of four members was abolished and replaced by a single commissioner to be appointed by the Governor. Teachers were required to take an oath of fidelity identical with that taken by Legislators and State officers.

A Banking Advisory Board was created, to consist of four members, and to suggest administrative steps and legislation for the regulation of banks. Banks were allowed to take their own stock as security for loans and to hold it in excess of the general statutory limit of one year. The writing of insurance on elevators and aircraft was per-

mitted. An act was passed to regulate the bonded debt of municipalities; it set for such debt a maximum of 7 per cent of a municipality's average assessed valuation, and it required reports to the State Auditor.

The right of individuals to sue for damages on the ground of alienation of affection, criminal conversation, seduction, or breach of contract to marry was abolished, as in a number of other States, under pressure of a movement against suits of a type commonly prone to abuse. It was forbidden to reveal illegitimacy either through public officials' giving information or through statements on birth certificates. It was made a misdemeanor, by a so-called anti-Nazi act, to circulate propaganda against religion, race, or creed.

A special session, called to meet October 25, repealed the sales tax.

Political and Other Events. The brief life of the sales tax was cut short by a combination of adverse influences, in which factional opposition to Governor Hoffman had a part. A Republican group that included the Rev. Lester H. Clee, speaker of the Assembly, pressed for meeting the cost of aid to the destitute by State economies, the diversion of other State funds, and the imposition of an income tax, as alternatives or in combination. This opposition, unsuccessful in the regular session, was renewed in the primary campaign. The Republican primary ticket carried many who sought nominations as advocates of the abolition of the tax. Although the tax had been paid for some 11 weeks without conspicuous check to trade, the primary election on September 17 brought heavy gains to its opponents. The Governor found himself forced a month later to call the legislative session that repealed the act. The outcome, not necessarily deplored by all the political figures in his party, was to diminish the prestige that he had won by his election in 1934.

The occasion that brought the sales tax was partly due to the FERA's demand that the State bear more of the burden of supporting the needy unemployed. In 1934, under the Democratic State administration of Governor Moore, the FERA had paid \$42,647,415, or over 85 per cent, of the total for this purpose, the State paying \$4,238,537 and its subdivisions \$2,296,066. Early in March the FERA called on New Jersey to contribute at the rate of \$2,000,000 a month as its proper share of the total.

In a brief interval between Governor Moore's leaving office to become United States Senator and the inauguration of Hoffman, Clifford R. Powell, President of the State Senate, succeeded as Acting Governor. In this capacity, on January 7, Powell exercised authority conferred in the creating act itself and proclaimed the immediate termination of the State's Industrial Recovery organization and of statutory State cooperation with the NRA. The State's recovery act, moreover, was declared unconstitutional by the State Supreme Court in a suit over a prior purchase of fuel oil, on January 23, shortly after its termination. The Court of Errors and Appeals held on May 17 that the act of 1934 to permit commercial dog-racing was unconstitutional. The State Public Service Commission ordered on April 25 that the Public Service Electric and Gas Company reduce its electric rates to the extent of \$5,176,566 a year, starting June 1; 65 per cent of the reduction was to be accorded to domestic customers.

Newark reported in September a somewhat higher percentage of collections, both of the current

year's taxes and of arrears, than for the same time a year earlier. Asbury Park, in default on its bonds and under the financial control of the State Municipal Finance Commission, was subjected to a Federal judgment for debt, requiring it to pay \$1,328,000 to certain of its bondholders by installments over 10 years. The bondholders not being residents of the State, the Court held that the Commission could not forbid their suit. Newark issued \$10,000,000 of bonds in February, with which it paid off its floating debt. Jersey City moved to effect a similar operation as to its short-term debts. A subway, built to divert trolley cars from the streets near the business centre of Newark, was put in operation on May 26; a new passenger station and bridge of the Pennsylvania Railroad, at Raymond Plaza, Newark, were opened on March 23. Trenton adopted, at a special election March 19, government by city manager and council.

Bruno R. Hauptmann, the accused in the abduction of the infant son of Charles A. Lindbergh, was tried at Flemington, convicted on February 13 of the murder of the baby, and sentenced to death. The execution of Hauptmann was put off by his counsel's steps for an appeal.

Officers. The chief officers of the State, serving in 1935, were: Governor, Harold G. Hoffman; Secretary of State, Thomas A. Mathis; Treasurer, William H. Albright; Comptroller, Frank J. Murray; Attorney-General, David T. Wilentz; Commissioner of Education, Charles H. Elliott.

Judiciary. Chancellor, Luther A. Campbell; Supreme Court, Thomas J. Brogan (Chief Justice), Thomas W. Trenchard, Charles W. Parker, Frank T. Lloyd, Clarence E. Case, Joseph L. Bodine, Ralph W. E. Donges, Harry Heher, Joseph Perskie.

NEW JERUSALEM, CHURCH OF THE. An organization which is also known as the New Church, and popularly called Swedenborgian because based upon the statement of Christianity set forth in the writings of Emanuel Swedenborg, Swedish scientist, philosopher, theologian, and seer (1688-1772). The two bodies that now compose it in the United States are the General Church of the New Jerusalem and the General Convention of the New Jerusalem. For history see THE NEW INTERNATIONAL ENCYCLOPEDIA under *Swedenborgians*.

The General Church of the New Jerusalem. This body, which separated from the General Convention over the question of the divine inspiration of Swedenborg's writings, was organized in 1897 under episcopal government. Its headquarters are in Bryn Athyn, Pa., where it maintains a cathedral of unusual architectural interest and the Academy of the New Church, with departments from kindergarten to junior college and including also a theological and a normal school. On Jan. 1, 1935, the General Church had a world-wide membership of 2173. Of its 21 societies and five "circles," 16 were in the United States and Canada, three in England, and others in France, the Netherlands, Sweden, Natal, New South Wales, and Brazil, while a native mission was maintained in South Africa. The Church was served by three bishops, 35 pastors, and four ministers. Its official periodical is *New-Church Life*.

The General Convention of the New Jerusalem in the United States of America. In 1935 the General Convention consisted of about 6000 communicant members, united into 84 societies, territorially organized as 12 associations and seven independent societies. The ministerial membership

was 104. The Convention maintained the New-Church Theological School in Cambridge, Mass., Urbana College in Urbana, Ohio, and the Waltham School for Girls in Waltham, Mass. Among its periodicals were the *New-Church Messenger*, weekly, Brooklyn, N. Y.; *The Helper*, weekly, Philadelphia, Pa.; and *Victory*, monthly, Los Angeles, Calif. At the Convention's 114th annual meeting, held in Detroit, Mich., June 16-23, 1935, the Rev. Fred Sidney Mayer of Baltimore, Md., was reelected president; Ezra H. Alden, of Philadelphia, Pa., vice-president; Albert P. Carter, of Boston, Mass., treasurer, and Benjamin A. Whittemore of Boston, recording secretary.

NEW MEXICO. Population. On Apr. 1, 1930 (Fifteenth Census), 423,317; July 1, 1934 (latest Federal estimate), 437,000; 1920 (Census), 360,350. Santa Fe, the capital, 11,176 (1930); Albuquerque, 26,570.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	161,000	334,000*	\$2,906,000
	1934	156,000	283,000*	3,820,000
Cotton	1935	89,000	78,000*	4,645,000
	1934	90,000	89,000*	5,782,000
Corn	1935	285,000	3,848,000	2,886,000
	1934	136,000	1,088,000	1,153,000
Wheat	1935	124,000	1,036,000	939,000
	1934	125,000	711,000	650,000
Grain sorghums ..	1935	390,000	4,290,000	2,415,000
	1934	242,000	1,694,000	1,592,000
Dry beans	1935	110,000	302,000*	951,000
	1934	44,000	66,000*	370,000

* Tons. † Bales. ° 100-lb. bags.

Mineral Production. Coal produced totaled 1,382,000 net tons (1935), compared with 1,259,323 (1934). Petroleum increased considerably, to 16,915,000 barrels (1934), from 14,116,000 (1933) and made a new high record of annual production. Large wells were brought into production in the Cooper field, previously thought a producer of gas only. Gasoline was produced from natural gas, to the quantity of 21,900,000 gallons in 1934, which exceeded the total for 1933 by 14.4 per cent.

Education. For the academic year 1934-35 the number of inhabitants of school age was reckoned as 157,869. Enrollments in the public schools numbered 117,243. Of these, 99,996 were in common schools or elementary grades, and 17,247 were in high schools. The year's current expenditure for education in the State came to \$5,327,095; the total expenditure, to \$6,039,044. The annual salaries of teachers averaged \$969.

Charities and Corrections. The State government's administration of matters connected with the public care and custody of persons did not include in 1935 any central body holding general authority. The State Penitentiary was directed by a Superintendent. This Superintendent and five appointed members constituted a Board of Penitentiary Commissioners, who considered applications for parole or pardon and counseled the Governor as to their disposal. The Penitentiary's inmates averaged 567 in number for the year ended with June 30.

Legislation. A constitutional amendment, to exempt homesteads to a valuation not above \$2500 from direct taxation, was submitted to a referendum of the voters.

Political and Other Events. A riot of unemployed men at Gallup cost three lives on April 4. Ten of the alleged rioters were arrested on a charge of murder. Robert Miner, stated to be a

Communist leader, accompanied by a lawyer from Philadelphia, went to Gallup to aid the arrested men. On May 2 the two were found by Indians near the Tohatchi Reservation, and taken to the reservation's hospital, complaining that they had been abducted and beaten by masked men. The Civil Liberty and Labor Defense leagues later sought an investigation of the affair in Congress.

Officers. The chief officers of the State, serving in 1935, were: Governor, Clyde Tingley; Lieutenant-Governor, Luis C. de Baca; Secretary of State, Elizabeth F. Gonzales; Auditor, Jose O. Garcia; Treasurer, James J. Connelly; Attorney-General, Frank H. Patton; Superintendent of Public Instruction, H. R. Rodgers.

Judiciary. Supreme Court: Chief Justice, D. K. Sadler; Associate Justices, Andy Hudspeth, A. L. Zinn, Howard Bickley, C. R. Brice.

NEW ORLEANS BRIDGE. See BRIDGES; RAILWAYS.

NEW SOUTH WALES. A State of Australia. Area, 309,432 sq. miles; population (June 30, 1935 estimate), 2,644,760 exclusive of 9714 (1933 census) aboriginals (8485 half-caste and 1229 full-blood). During 1934 there were 43,335 births, 23,474 deaths, and 20,210 marriages. Chief towns (with 1933 census populations): Sydney (capital), 1,235,367; Newcastle, 104,491; Broken Hill, 26,921; Goulburn, 14,851; Cessnock, 14,387; Lithgow, 13,444. In 1934, the 3458 State schools had 382,641 students; the 755 private colleges and schools (exclusive of many business schools), 95,849 students; the University of Sydney, 3043 students.

Production. Wheat, barley, oats, maize, rice, sugar cane, tobacco, bananas, oranges, grapes, and apples were the main agricultural products. Live-stock in the State (1934): 52,104,000 sheep; 3,361,771 cattle, 532,028 horses, and 367,116 pigs. Production (1933-34): Wool, 486,152,493 lb.; butter, 147,963,411 lb.; cheese, 9,072,508 lb.; bacon and ham, 21,081,586 lb.; wheat (1934-35), 49,000,000 bu. Mineral production (1934) was valued at £7,769,138 including coal (£4,541,923), silver and lead (£2,200,000), gold (£307,662), and tin (£328,130). During 1933-34 the value of production from the 7818 factories, with 154,061 employees, was £54,042,154 (Australian £ averaged \$4.0095 for 1934).

Government. For the fiscal year ended June 30, 1935, revenue was £48,425,000; expenditure, £51,271,000; gross public debt, £337,101,000. Executive power was vested in a governor. Legislative power rested with a parliament consisting of a legislative council of 60 members, and a legislative assembly of 90 members elected for three years. Governor, Brig.-Gen. Sir A. Hore-Ruthven who was to be succeeded, during January, 1936, by Sir David Anderson. Premier, B. S. B. Stevens. The standing of the parties in the Legislative Assembly elected May 11, 1935, was: United Australia party, 37; United Country party, 23; State (Lang) Labor party, 30. See AUSTRALIA.

NEW YORK. Population. On Apr. 1, 1930 (Fifteenth Census), 12,588,066; July 1, 1934 (latest Federal estimate), 13,059,000; 1920 (Census), 10,385,227. New York City had (1930) 6,930,446 inhabitants; Buffalo, 573,076; Rochester, 328,132; Syracuse, 209,326; Albany, the capital, 127,412.

Agriculture. The table on page 532 shows the acreage, production, and value of the principal crops for 1935 and 1934.

Mineral Production. The production of coke increased to 4,089,708 net tons (1934) from 3,426,-

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	4,023,000	5,475,000*	\$45,442,000
	1934	4,000,000	3,056,000*	56,797,000
Corn	1935	648,000	22,032,000	17,626,000
	1934	617,000	21,286,000	18,732,000
Oats	1935	844,000	25,742,000	10,297,000
	1934	836,000	23,408,000	12,874,000
Potatoes	1935	195,000	21,450,000	12,870,000
	1934	210,000	32,550,000	13,020,000
Apples	1935	.....	16,875,000	12,825,000
	1934	.....	11,844,000	13,028,000
Wheat	1935	275,000	6,273,000	5,028,000
	1934	260,000	4,416,000	4,245,000
Dry beans	1935	112,000	874,000	2,622,000
	1934	110,000	891,000	3,029,000
Barley	1935	154,000	4,158,000	2,121,000
	1934	162,000	3,969,000	2,778,000
Buckwheat	1935	140,000	2,380,000	1,261,000
	1934	147,000	2,911,000	1,630,000

* Tons. † 100-lb. bags.

529 (1933); in value it rose to \$25,283,246, from \$19,232,209. There was a substantial production of pig iron, evidenced by blast furnaces' shipments of 961,679 gross tons (1934), as against 851,496 (1933); in value the shipments totaled \$14,621,274 (1934) and \$12,344,827 (1933). The iron ore mined in the State could supply but little of the raw material for this pig iron; but the production of iron ore rose to 244,962 tons for 1934, from 58,718 tons for 1933.

Some 3,800,000 barrels of petroleum were reported to have been produced in 1934, as against about 3,174,000 in 1933. Efforts were made, with much drilling and some success, to extend the still recent finds of natural gas in the State. Successful wells were driven in Oneida and Allegany counties. Some wells of substantial yield were driven in Steuben, Cayuga, and Lewis counties.

The producers' yearly sales of salt, 1,866,280 short tons for 1934, were at about the same level as the 1,847,696 tons of 1933; by value the total for 1934 was \$5,263,394. There were mined, in 1934, 391,408 short tons of gypsum, in value, \$3,922,529.

Education. The academic year 1933-34 was the latest for which the statistics as to the public schools had been summarized. For that year the number of the State's inhabitants not over 18 years of age was reckoned as 3,988,276. There were enrolled in the public schools, during the year, 2,296,868 pupils. Of these, 1,683,731 were in elementary grades or common schools; in high schools, 613,137. The year's expenditures for public-school education throughout the State totaled \$315,187,956, inclusive of expended proceeds of sale of bonds and certificates of indebtedness; exclusive thereof, the total was \$309,834,631. Of the latter total, current expenditure made \$254,345,337; service of debt, \$52,638,779; and capital outlay not defrayed by bonds, \$2,850,516. But the whole capital outlay (including sums raised by issue of bonds and certificates of indebtedness) came to \$8,203,840. The salaries of teachers, for the year, averaged \$2308.51. A State act of 1935 having rendered attendance at school, after September, 1936, compulsory up to the age of 16 years, the secondary schools engaged in planning for higher enrollments. "Emergency collegiate centres," 21 in number, had over 3300 students. See EDUCATION IN THE UNITED STATES.

Charities and Corrections. The central administrative authority as to the State's care and custody of persons, under the system in force in 1935, lay chiefly in three State departments, those of Social Welfare, of Mental Hygiene, and of Correction. The Department of Social Welfare (David C. Adie, Commissioner) included a directing body

of three members, the Board of Social Welfare. It administered the public allowances to the needy aged; supervised activities for the welfare of children, wayward minors included; exercised general supervision over county boards' grants of aid to dependent mothers; examined agencies for placing and for boarding dependent children; supervised the public medical institutions, except those for mental ill; supervised the counties' and localities' public homes (formerly almshouses) and other institutions for the care of dependent adults; handled matters of Indian welfare; performed duties on behalf of the blind; and administered five State institutions. These five were: for delinquent minors, the State Agricultural and Industrial School, at Industry, the State Training School for Boys, at Warwick, and the State Training School for Girls, at Hudson; the Thomas Indian School, at Iroquois; for soldiers, sailors, their wives, mothers, widows, and daughters, the State Women's Relief Corps Home, at Oxford.

The twenty mental hospitals maintained by the State were controlled by the Department of Mental Hygiene; these contained approximately 60,000 patients, not to count those out on parole. The correctional institutions were under the Department of Correction (Walter N. Thayer, Jr., Commissioner), while a Division of Probation dealt with the granting of probationary release from confinement. The State Prisons at Attica, Auburn, Clinton, Great Meadow, Sing Sing, and Wallkill contained 8126 prisoners on June 30, 1935; Elmira Reformatory, 1242; Westfield State Farm, at Bedford Hills, 202 in the reformatory section and 143 in the prison; institutions for defective delinquents, at Napanoch and Albion, 1223, the two hospitals for the criminal insane, at Beacon and Dannemora, 2209; the New York State Vocational Institution, at Cossackie, 309.

Legislation. The regular annual session of the Legislature passed several resolutions to amend the State constitution, in case of their second passage in the following year and subsequent ratification by popular vote. The proposed amendments included the increase of the duration of the terms of Governor and Lieutenant-Governor to four years; of the members of the Assembly (lower house) to two years; and rendering civil verdicts valid when supported by only ten of the twelve jurors in a case. Second passage was given a proposed amendment to alter the form of government for counties.

For the financial needs of the State the Legislature authorized (subject to approval at the polls) the issue of \$55,000,000 of the State's bonds in order to help meet the cost of support for the needy unemployed; appropriated \$10,000,000 from revenue to the same use; imposed or raised taxes in order to produce an additional \$55,750,000 a year, mainly through greater income taxes and an additional one cent a gallon on sales of gasoline; and appropriated \$40,000,000 for public works for which the State anticipated obtaining Federal grants.

With regard to the State organization, acts abolished the old State Council of Farms and Markets, through which the Agricultural Department was controlled by Republicans, and put that department under a single appointed commissioner, whereby it could be put under Democratic control; created a central detective bureau as part of the State police; set up a State Planning Board to study State policies with a view to consistency and forehandedness; required bipartisan boards of elections in those counties, mainly Republican, which had not had them; created a State Publicity Bu-

reau; and expanded the powers of the State Banking Board.

In the field of social legislation, a system of insurance against unemployment was instituted, to provide payments to persons losing employment, a fund to be created through a levy on employers, at a percentage (ultimately rising to 3 per cent) of their payrolls; attendance at school was required of the young until they attained the age of 16 years; the system of workmen's compensation was extended to cover cases of all diseases regarded as occupational; a trial by jury was accorded to every person who should be charged with having violated an injunction issued by a court in the matter of a labor dispute; and a special commission was created for the study of interstate compacts as to legislation affecting employees; the Schackno Act for the enforcement of industrial codes under the NRA, attacked on constitutional grounds, was amended in order to render it valid; and colleges, schools, and libraries receiving public support were forbidden to make discrimination against individuals.

Dealing with privately owned business and property, the Legislature prolonged for another year the State's moratorium on proceedings against delinquent mortgagors; created a separate Mortgage Commission to take over from the Superintendent of Banks the administration of the interests of owners of defaulted mortgage certificates (thus affecting some \$800,000,000, at par value, of such certificates), and directed the continuation of the previous Legislature's inquiry, by investigating committee, into alleged wrongful conduct of public utility companies.

In the concerns of New York City were enacted an extension, until June 30, 1936, of the city's authority to levy its emergency-meeting taxes; an extension, until Sept 1, 1938, of the time in which the city's directly owned subway need not charge a fare high enough to render it self-supporting; a requirement that the employees of this subway have vacations of two weeks every year with pay; authorization to the city to acquire the privately owned subways, create a single, merged, municipally owned system, and operate it through a Board of Transit Control, subject to orders from the existing Transit Commission.

Measures affecting special interests included permission of dramatic and musical performances for pay, on Sundays, subject to local permissive ordinances; and permission to the manufacturer of trademarked goods to stipulate in contracts with retailers the price at which the goods might be sold to consumers.

Touching the work of the courts, a measure was enacted to prohibit "ambulance-chasing," i.e., rushing to solicit injured persons likely to have a claim at law for damages, either on the part of lawyers seeking to represent the solicited person or on that of insurance companies seeking to settle claim; a lawyer's dividing his fees with a layman was forbidden; the old system by which, when a divorced husband had been condemned to civil imprisonment for non-payment of alimony, the charge of alimony continued to accumulate, was ended by a law stopping alimony for the term of the imprisonment; suits on account of injury to person or property were allowed to survive the decease of the defendant; the consorting of persons of evil reputation, essentially of criminals, was rendered *prima-facie* evidence of unlawful purpose; the courts were authorized to admit microscopic examination of blood as a test of paternity; the in-

dividual's right of civil action to recover damage for alienation of affection, criminal conversation, seduction, or breach of contract to marry was abolished. Promiscuous display of the uncovered person was made a criminal offense, by a so-called anti-nudist law.

Political and Other Events. Governor Lehman, who a year earlier had recommended the cessation or reduction of some State taxes, in the expectation that they would not be needed, found himself obliged in January, when offering his budget, to estimate a rise of the cumulative deficit to \$74,850,391 by the close of the fiscal year at the end of June. He attributed this rise to the failure of actual receipts from taxes to come up to expectations. He called for appropriations of \$284,080,804 for the fiscal year 1936 and for new taxation designed to produce \$55,750,000 in that year.

The Unemployed. The State's deficit for the fiscal year ended with June 30 did not reflect that part of the cost of its contribution to the support of the needy unemployed which was met through the issue of some \$40,000,000 of bonds. The cost of supporting the unemployed was strikingly high for New York, even as compared with the cost per capita among other States. For 1934 it attained \$274,403,079, or 18.54 per cent of the like expenditure, as reported by the FERA, for the whole country. The FERA paid 55.5 per cent of the cost in New York; local funds, more than one-fourth; and the State, less than one-fifth, expending \$50,322,160. The combined expenditure in the State exceeded \$20 *per capita* of the population, as against a corresponding rate of some \$12 for the whole country. The excess in the State's case arose partly from a higher proportion of needy unemployed persons than the country's average; partly, from a higher average cost of the necessities of life. The State's relief administration estimated that as late as in March, 1935, 2,200,000 individuals, fully one-sixth of the population, obtained public support. The State's recourse to issues of bonds to meet its share of this assistance, even while many less powerful States paid wholly or chiefly out of revenue, was partly due to a ready sale for New York's bonds at low interest.

Great efforts were made in the latter part of the year to supplant direct support in New York with the Federal Administration's scheme of "work relief." General Hugh S. Johnson, former head of the NRA, was put in charge of the task in New York City. The President allocated on October 8, to plans for "work relief" in the State, \$105,509,000 to become immediately available. The Federal authorities took direct charge of administering aid to all the needy except the unemployables, who were left to the State's organization. By the end of November the people dependent on public support had been in great part shifted to a wage-receiving basis.

Other State Matters. The State Court of Appeals upheld the law of 1934, imposing on public utility companies the cost of the Public Service Commission's investigating them, in a decision on July 11. It upheld on April 16 a law allowing the Milk Control Board of the State to let non-advertising sellers of milk charge less than the advertising companies. But the State's effort to fix the retailing prices for milk was imperiled by the Federal Supreme Court's decision of March 4, that the State had not power to prescribe the price that companies should pay for milk bought in other States and brought into New York. The Schackno Act, the State's act to provide conformity with the

NRA, was held unconstitutional by the State Court of Appeals on April 26; but the decision held only against the original act, as to which suit had been brought; not against the act as amended in the legislative session of 1935.

State action against public utility companies was vigorously pursued. Not only did the Legislature's investigation delve industriously into such companies' conduct, but in the administrative field the State Power Authority issued on March 4 a special report condemning the valuation set by the electric utility companies of New York City on their properties. The report proposed a valuation, as a basis for the rates that the companies might charge, of some \$450,000,000, whereas the companies had put forward a valuation exceeding this by some 62 per cent. The rates authorized in the course of many years of State regulation were declared to have yielded the companies excessive profits of a great aggregate sum.

Floods on July 9 followed heavy general rains exceeding 8 inches of precipitation in some areas. Damage to property, estimated to exceed \$10,000,000, occurred chiefly in the neighborhoods of Binghamton, Hornell, Ithaca, and Delhi. Federal and State authorities provided aid in the devastated areas. The Saratoga Spa was opened as a State-owned enterprise on July 26. The State-built highway to the top of Whiteface Mountain was opened on July 20. See **FLOODS**.

In the State elections on November 7, Republicans won a majority in the State Assembly (lower legislative house). A new bond issue to provide means for meeting the cost of aid to the needy was approved by popular vote. The vote also adopted three amendments to the State constitution; these provided for greater self-government for counties, the sufficiency of verdicts in civil cases when five-sixths of the trial jury should subscribe and the abolition of the additional liability of stockholders in State-chartered banking institutions, to double the par value of their stock.

Affairs of New York City. Another of the succession of commissions set up to draft a new charter for the government of the City of New York was appointed by Mayor La Guardia on January 13. It consisted of Thomas D. Thacher, chairman, and included Joseph M. Proskauer, Thomas I. Parkinson, Charles E. Hughes, Jr., S. John Block, Joseph D. McGoldrick, Charles G. Meyer, Frederick L. Hackenbush, and Mrs. W. P. Earle, Jr. The City's Board of Estimate voted for the year 1936 a budget calling for expenditure of \$613,369,407, divided into two parts, the first, totaling \$545,541,843 and styled the "tax-levy budget," was to be met by a slightly higher expected total of receipts from taxes; the second part, totaling \$67,827,564, was to come from "other funds." The sum appropriated in the budget as a reserve fund under the city's agreement with bankers that had lent it financial support was cut to \$10,500,000, from \$17,000,000.

The Board of Estimate voted on April 5 to repeal a municipal income tax that had been imposed but not yet put into effect. The city's chief new tax in 1935 was a levy on purchasers at the rate of 2 per cent on the prices of goods sold them. The State Court of Appeals held this sales tax valid, on July 11. Its yield, up to mid-year, fell short of expectation, though the Comptroller took legal steps to compel merchants, who collected the tax with their own receipts, to turn it in. A less stringent economic situation on the other hand helped collection of the ordinary taxes.

Large allotments were made to New York City by the PWA and the WPA for works intended to diminish idleness. General Hugh S. Johnson, who headed the administration of the WPA in the city for three months starting with July, did much toward shifting the unemployed from dependence on donated public support to paid work on public undertakings. He withstood a strike, supported by labor unions, against the WPA's paying less than union wages.

Mayor La Guardia's administration made headway with the proposal, which had hung fire for years, that the City buy control of the two privately owned subway systems, the BMT and the Interborough, to unite them with its own system. The city obtained late in the year an understanding on the subject with representatives of the BMT, conditional on the approval of the holders of the BMT's securities. This understanding was held open while the city sought a similar one with the Interborough; that company being in receivership and holders of securities at odds, the attainment of a definite understanding proceeded more slowly.

The Consolidated Gas Company, controlling companies purveying most of the electricity used in the city, sustained attacks from many directions. The Federal Government made preparations toward building a plant to supply its own local needs in New York City. The government of New York City voted to construct an electric generating system of its own. The State Court of Appeals, in October, denied it the right to carry out its plan; but in the meanwhile the company, further impelled by an adverse report of the State Power Authority, by a Legislative investigation, and by the Public Service Commission's moves to require it to lower its rate, offered in May a new schedule of rates reducing its revenue by an estimated \$7,566,500 a year. The Commission approved the schedule, which went into effect in August.

Governor Lehman appointed a special prosecutor, Thomas E. Dewey, to conduct an investigation by a grand jury, as to "rackets" and similar law-breaking enterprises in New York City. A project to hold a world's fair on a site bordering on Flushing Bay in the borough of Queens was broached in September and gained assurances of cooperation from the Board of Estimate, the exposition was to be held in the years 1939 and 1940.

The City began in July to subject sewage, formerly discharged into surrounding waters, to chemical treatment. It transported the resulting sludge, taken from settling tanks, 10 miles out to sea and dumped it. New Jersey invoked the Federal Supreme Court's order of December, 1933, restraining New York City from dumping garbage off the coast, to stop the similar dumping of the sludge. The Court held hearings on the new action of New Jersey in the autumn.

Officers. The chief officers of the State, serving in 1935, were: Governor, Herbert H. Lehman; Lieutenant-Governor, M. William Bray; Secretary of State, Edward J. Flynn; Comptroller, Morris S. Tremaine; Attorney-General, John J. Bennett, Jr.; Commissioner of Education, Frank P. Graves.

Judiciary. Court of Appeals: Chief Judge, Frederick E. Crane, Associate Judges, Irving Lehman, John F. O'Brien, Irving G. Hubbs, Leonard C. Crouch, John T. Loughran, Edward R. Finch.

NEW YORK CITY. See **MUSIC; SEWERAGE AND SEWAGE TREATMENT; RAPID TRANSIT; TUNNELS; NEW YORK** under *Political and Other Events*.

NEW YORK, NEW HAVEN, & HARTFORD RAILROAD. See RAILWAYS.

NEW YORK UNIVERSITY. A nonsectarian and privately governed institution for the higher education of men and women in New York City, chartered in 1831. It comprises the following divisions: At University Heights, a college of arts and pure science, college of engineering, Guggenheim school of aeronautics; at Washington Square, the graduate school, school of law, school of commerce, accounts, and finance, Washington Square college, school of education, school of retailing, division of general education; at the Wall Street division, the graduate school of business administration and courses in the school of commerce, accounts, and finance. The medical college is on East 26th St.; the dental college on East 23d St.; the school of architecture and allied arts, on Sixth Avenue at Bryant Park, and Nassau College at Hempstead, Long Island.

The enrollment for the year 1934-35 in all divisions of the university, after deducting all duplications, was 34,319, including college of arts and pure science, 1327; school of law, 1244; New York University College of Medicine, 592; college of engineering, 1903, graduate school, 1917; school of education, including both graduate and undergraduate divisions, 7014; school of commerce, accounts, and finance, including Wall Street division, 8126; Washington Square college, 5442; graduate school of business administration 1112; school of retailing, 487; college of dentistry, 516; school of architecture and allied arts, 745; the combined summer divisions (1935), 6222; division of general education and related courses, 6028.

The faculty of the university numbered 1786, including 201 professors, 118 associate professors, 194 assistant professors, and 773 instructors. The productive funds for the year 1934-35 amounted to \$9,091,864, and the income was \$294,595. The total income of \$6,934,554 was derived as follows: Student fees, \$6,016,876; dormitory rents, \$51,693; gifts, \$274,496, other income, \$296,892, and income from endowments, \$294,595. The libraries contained 437,598 volumes. Chancellor, Harry Woodburn Chase, Ph.D., LL.D.

NEW ZEALAND. A British dominion in the South Pacific. Capital, Wellington.

Area and Population. New Zealand has an area of 104,015 square miles, including some 600 square miles of outlying islands. The estimated population of New Zealand proper on Jan. 1, 1935, was 1,557,043, including 74,134 Maoris, compared with the 1926 census population of 1,408,139 (63,670 Maoris). The two main islands are North Island, with 1,003,180 inhabitants on Apr. 1, 1935, and South Island, with 550,650 inhabitants. About 51.6 per cent of the population lives in urban communities of 2500 or more. Estimated populations of the chief cities on Apr. 1, 1935, were: Wellington, 114,950; Auckland, 107,750; Christchurch, 92,900; Dunedin, 70,450. Living births in 1934 numbered 24,322; deaths, 12,527; marriages, 11,256; immigrants, 23,241; emigrants, 26,617.

Education. Less than 2 per cent of the population over school age is illiterate. Education is compulsory between the ages of 7 and 14. School statistics at the beginning of 1934 were: 2531 public primary schools, with 200,641 pupils; 309 private elementary schools, with 26,428 pupils; 137 native village schools, with 7340 pupils; 44 secondary schools, with 15,238 pupils; 81 district high schools, with 4389 pupils; 21 technical high and day schools, with 7149 students; 54 private secondary schools,

with 4063 pupils; and 10 Maori secondary schools, with 302 pupils. The University of New Zealand had four constituent colleges at Dunedin, Christchurch, Auckland, and Wellington, with 4806 students in 1933.

Production. Animal husbandry is the main industry. In 1930 there were 2,143,000 acres of arable land; 16,513,000 acres of grass and pasture; 411,000 acres of shrubs and bushes; and 13,000,000 acres of forests. The value of production in 1932-33 was: Pastoral, £20,400,000 (New Zealand currency); dairying, poultry raising, bee keeping, £21,200,000; agriculture, £8,900,000. Livestock in 1935 included 4,293,499 cattle, 29,076,754 sheep, 762,755 swine, and 272,986 horses. Production of the chief crops in 1933-34 was (in thousands of units): Wheat, 9036 bu. (5937 bu. in 1934-35); barley, 731 bu.; oats, 3243 bu.; corn, 373 bu.; peas, 698 bu.; potatoes, 4892 bu.; linseed, 25 bu.; grass and clover seed, 20,830 lb. The production of pork, bacon, and ham in 1933-34 was 89,608,000 lb.; dressed mutton and lamb, 531,083,000 lb.; beef, 293,042,000 lb.; veal, 954,410 carcasses; wool, 300,500,000 lb. Coal production in 1934 was 2,060,315 tons; gold, 4570 kilograms; silver (exports), 11,180 kilograms. In 1933-34 there were 5028 factories in operation, with 72,651 employees and a value of output of £71,770,872 (£68,138,000 in 1932-33).

Foreign Trade. General imports in 1934 were valued at £26,961,000 (£21,451,000 in 1933) and exports of New Zealand products at £46,771,000 (£40,409,000 in 1933). Leading 1934 imports were: Textiles, £6,621,187; motor cars and parts, £3,291,818; iron and steel, £3,092,121; petroleum products, £1,760,214; electrical machinery and apparatus, £1,339,643; other machinery, £1,321,645. The chief exports were: Wool, £12,516,425; frozen meat, £11,886,955; butter, £10,042,776; cheese, £4,694,459; hides and skins, £2,204,690; gold, £1,320,690. Of the total imports in 1934, the United Kingdom supplied £16,153,236; United States, £3,548,554; Australia, £3,529,635; Canada, £2,088,134; Netherlands India, £1,376,760. Of the exports, the United Kingdom took £38,629,240; Australia, £1,882,516; United States, £1,250,364; France, £1,228,699.

Imports in 1935 totaled about £35,796,000; exports, £46,056,000. United States imports from New Zealand were £10,351,421 (\$5,592,271 in 1934); exports to New Zealand, £15,610,238 (\$12,999,140 in 1934).

Finance. For the fiscal year ended Mar. 31, 1935, governmental receipts totaled £26,126,094 and expenditures £24,499,595, excluding accounts of the state railways, telegraph, and postoffice. The public debt on Mar. 31, 1934, totaled £302,791,996 (£282,622,958 on Mar. 31, 1933). The New Zealand pound, the unit of currency used in this article, has the same par value as the pound sterling.

Communications. The railways, practically all state owned, had 3320 miles of line in 1934. In 1934-35 they carried 19,654,467 passengers and 6,023,960 long tons of freight. Highways extended 50,930 miles on Jan. 1, 1935. Premier Coats announced in October, 1935, that arrangements had been completed for the inauguration in 1936 of an air service from the United States by Pan American Airways. Seventy airports and landing fields were under construction in New Zealand in 1935. During 1934 a total of 585 vessels of 2,633,861 tons entered the ports in the overseas trade. See AERONAUTICS under *Trans-Oceanic Air Service*.

Government. Executive power is exercised by the Governor-General, appointed by the Crown on recommendation of the Dominion Government.

Legislative power rests with the Governor-General and a Parliament of two chambers—the Legislative Council of 30 members appointed by the Governor-General for seven years, and the House of Representatives of 80 members, elected by general suffrage for three years. Prime Minister at the beginning of 1935, George William Forbes, heading a coalition of the Reform and United parties, with 24 Laborites and 9 Independents in Opposition. Governor-General, Viscount Galway, who assumed office in March, 1935. For changes in 1935, see *History*.

HISTORY

The Labor Victory. Despite the successful record of Prime Minister Forbes's Nationalist coalition government in guiding New Zealand safely through the world economic depression, the Labor party won a sweeping victory in the general election of Nov. 27, 1935. It captured 53 seats in the House of Representatives as compared with 24 seats formerly held, while the standing of the Nationalist coalition declined from 47 to 19 seats. Independents won 8 seats as against 9 in the previous House. The Democrats, a new conservative party organized to oppose the "socialistic" measures of the Forbes Government, won only 1 seat.

A new Labor Cabinet was formed on Dec. 5, 1935, with Michael J. Savage, leader of the Labor party, as Prime Minister and Minister of External and Native Affairs. Other members of the cabinet were: Minister without Portfolio, Mark Fagan; Education, Health and Marine, Peter Fraser, Attorney General and Minister of Justice, Henry G. R. Mason; Finance and Customs, Walter Nash; Internal Affairs and Pensions, W. E. Parry; Public Works and Transport, Robert Semple; Railways and Industries, Daniel G. Sullivan; Agriculture, W. L. Martin; Lands, F. Langstone; Labor, Employment, and Immigration, W. H. T. Armstrong; Mines, F. P. C. Webb; Postmaster General and Minister of Defence, F. Jones.

Discontent with the economies practised by the Forbes Government in balancing the budget and dissatisfaction with the extent of the Dominion's recovery under coalition rule appeared to be the chief reasons for the Labor landslide in both rural and urban communities. Labor campaigned on a platform calling for public control of credit through a national credit authority "whose duty it will be to provide a money service sufficient to give effect to the will of Parliament"; reemployment of all able-bodied workers in industry, public works, and services; guaranteed stable prices to farmers and others producing in accordance with the Dominion's requirements; the readjustment of mortgages on the basis of guaranteed prices. Government control of credit was to provide every person able and willing to work with a decent standard of living. Reciprocal trade agreements with other countries, minimum wages and salaries, national health insurance, a national superannuation and pension system, the fostering of secondary industries, reorganization of the school system, and restoration of salary and wage cuts, were other Labor planks. The semi-private corporation established by the Forbes Government in March, 1935, to ease the burden of rural mortgages was to be placed under complete state control. The Labor party stood also for close coöperation with the other members of the British Commonwealth of Nations and for support of the League of Nations for the maintenance of peace.

Two other important reforms proposed by the Labor party were the abolition of the 5 per cent

sales tax on wholesale transactions, and the restoration of the New Zealand pound to a parity with sterling. (The Forbes Government had arbitrarily fixed the New Zealand pound at 25 per cent under the pound sterling.) Labor's victory was followed immediately by a cancellation of orders for merchandise, in anticipation of the abolition of the sales tax, and by an inflow of funds seeking to profit by the expected appreciation of the local pound. Prime Minister Savage quickly announced that no immediate changes were contemplated in the sales tax and the exchange rate, and that when made the changes would be very gradual and at indefinite intervals. This statement had a stabilizing influence and Mr. Savage's reputation for moderation served further to allay business uneasiness. He called the new Parliament for early in 1936, stating that it would remain in session until the Labor programme was carried into effect.

A poll on the liquor question held at the time of the general election gave the following result: For continuance of the existing system, 347,486; for prohibition, 274,904; for State purchase and control, 59,546.

Relations with Britain. Prime Minister Forbes and Minister of Finance J. Gordon Coates spent four months in London during the year. Besides representing New Zealand at the silver jubilee of King George's accession to the throne, they conferred at length with British and other Dominion officials on provisions of the Ottawa Agreements, particularly with respect to the regulation of meat imports into Great Britain from the Dominions. As a result of these negotiations a temporary but satisfactory agreement on the meat question was concluded between the British Government on the one hand and the Governments of Australia and New Zealand on the other (see AUSTRALIA and GREAT BRITAIN under *History*). While in London, Finance Minister Coates arranged for the conversion on July 1 of £10,135,800 of New Zealand 5 per cent bonds maturing between 1935 and 1945 in a £8,000,000 issue at 3 per cent, maturing in 1936-61. The offering was greatly oversubscribed, applicants receiving only 23 per cent of their requests.

With her customary loyalty to the mother country, New Zealand joined wholeheartedly in supporting Britain during the crisis with Italy over Ethiopia (q.v.). On October 16 Prime Minister Forbes announced that his government had lent the cruiser *Diomedé*, of 4765 tons, to the British Admiralty at the request of the London government. New Zealand also joined in the application of League sanctions against Italy.

The Economic Revival. The steady improvement in economic conditions which became apparent in 1934 continued at an increased tempo in 1935. The basis for this recovery was the improved export prices for livestock and dairy products, upon which the Dominion's prosperity largely depends. The agreement with Great Britain ended uncertainty as to the future of the meat industry for a period of 18 months. Wool prices also increased and in the last quarter of the year the price of butter on the London market advanced to 125 shillings a hundredweight, as compared with an average value of 80 shillings for the year ended July 31. Unemployment declined, while building contracts, electric power consumption, sales tax receipts, government revenues in general, and imports from overseas all showed substantial increases.

The results of this widespread improvement were reflected in the budget proposals submitted

by the Forbes Government shortly after Parliament convened on August 29. Besides estimating a surplus of £NZ13,500 for the fiscal year, the budget provided for a 7½ per cent restoration in salaries of government employees; a reduction from 4.17 per cent to 3.34 per cent in the wage tax payable on all salaries and incomes; a substantial expansion of public works to absorb the unemployed; full restoration of old-age pensions; and a 7½ per cent increase to other pensions; and allowances to permanently unemployable ex-soldiers.

NICARAGUA, nīk'ā-rā'gwā. The largest in area of the Central American republics. Capital, Managua.

Area and Population. Nicaragua has an area estimated at 51,660 square miles and a population estimated in 1935 at 1,100,000 (668,119 at the 1920 census). Western Nicaragua contains about three-fourths of the population. The inhabitants are mainly of Spanish, Indian, or mixed blood, but there are many West Indian Negroes on the east coast. The chief cities, with their estimated populations, are: Managua, 50,000; León, 23,565; Granada, 18,066; Masaya, 13,763; Matagalpa, 10,271. The capital, destroyed by an earthquake in 1931, had been largely rebuilt by 1935.

Education. About 62 per cent of the people are illiterate. Enrollment in primary schools in 1932 was 22,573. Secondary education is in private hands. There are three universities, at Managua, León, and Granada.

Production. Agriculture, the main support of the population, is supplemented by lumbering, cattle raising, and mining. Bananas, coffee, sugar, corn, and coconuts are grown for export and cotton, corn, rice, and beans for domestic consumption. Banana shipments in 1934 totaled 2,686,000 bunches. The 1934-35 coffee crop was about 40,500,000 lb.; the cotton crop (1934), 800 metric tons; sugar exports (1934), 11,590,000 lb. The forests yield valuable cabinet and dye woods. Gold and silver are mined. A number of small establishments manufacture boots, shoes, straw hats, leather goods, soap, tobacco products, etc., for the domestic market.

Foreign Trade. General imports in 1934 were valued at 4,610,000 córdobas (3,814,261 córdobas in 1933) and exports at 5,230,000 córdobas (4,862,496 in 1933). Exports of coffee in 1934 (319,068 quintals) were valued at 2,374,480 córdobas, or 45 per cent of the total value of exports. Bananas accounted for 30 per cent of the exports. The value of gold exported in 1934 was 679,837 córdobas (414,554 in 1933), a 64 per cent increase. The United States purchased 49.7 per cent of all exports in 1934 and supplied 58.8 per cent of the total value of imports. Germany, Japan, and the United Kingdom were the other chief markets and sources of supply. The córdoba was equivalent to one U.S. dollar at par.

In 1935 imports totaled 5,072,876 córdobas. United States statistics for 1935 showed imports from Nicaragua of \$2,671,326 (\$1,668,286 in 1934) and exports to Nicaragua of \$2,434,383 (\$2,524,491 in 1934).

Finance. The government's actual revenues in the fiscal year 1933-34 totaled 4,214,000 córdobas (3,796,000 in 1932-33) and expenditures were 4,706,000 córdobas (4,233,000 in 1932-33). Exclusive of claims awards, the public debt on Jan. 10, 1935, totaled 8,194,000 córdobas (external, 2,317,000; internal, 955,000; floating, 4,922,000), compared with 10,006,000 córdobas on Feb. 28, 1934.

Communications. The state-owned Pacific Railroad is the main line in the country. It connects Corinto, the chief seaport of the west coast, with

León, Managua, Granada, Diriamba and several other interior towns. The total railway mileage was 366 miles. In 1934 there were some 150 miles of motor roads and 200 miles of cart roads. Air lines linked Managua, Bluefields, and Puerto Cabezas with the inter-American air network. Bluefields is the chief port on the east coast. A total of 403 steamers of 705,512 net register tons capacity entered the ports in 1934.

Government. The Constitution of 1913 vested executive power in a President elected for four years and legislative power in a congress of two houses—a Chamber of Deputies of 43 members elected for four years by popular suffrage and a Senate of 24 members elected for six years. The Deputies are renewed by halves every two years; the Senators by thirds every two years. President in 1935, Dr. Juan Bautista Sacasa (Liberal), who assumed office Jan. 1, 1933.

History. Gen. Anastasio Somoza, commander of the Nicaraguan National Guard, entered the race for the presidency in September, 1935, with the blunt statement that he would "eliminate all other candidates who bar my path." The cold-blooded murder of Gen. Augusto Sandino by members of the National Guard in 1934—a crime openly charged to General Somoza by Sandino's spokesman, Dr. Pedro José Zepeda—had removed perhaps the most formidable obstacle to Somoza's ambition (see 1934 NEW INTERNATIONAL YEAR BOOK, p. 523). In view of the circumstances surrounding Sandino's death, General Somoza's promise to "eliminate" all other rivals, published in *El Cronista* of León, caused a sensation in Nicaraguan politics.

Although Somoza's position as head of the National Guard and as a nephew of President Sacasa by marriage made him ineligible for the Presidency under the Constitution, he claimed the support of former President José María Moncada and other Liberals. Former President Emiliano Chamorro, a Conservative, also backed Somoza. Rival Liberal candidates included Vice President Rodolfo Espinosa, Foreign Minister Leonardo Arguello, and Sen Enoc Aguado. The elections were scheduled for November, 1936.

Signs of opposition to Somoza from other sources were not lacking. The explosion of the army supply depot in Managua in September, 1934, which left the government troops practically without ammunition, was attributed to conspirators desirous of ousting the National Guard commander. The charge that he dominated President Sacasa and the government's policy was widely circulated. José Antonio Lopez, former chief of the Managua police, was found guilty by court-martial of causing the explosion. In April, 1935, Capt. Abelardo Cuadra of the National Guard led some mutinous troops in a revolt against Sacasa and Somoza. The uprising was crushed and Cuadra and seven associates were sentenced to death. On May 1, however, President Sacasa commuted the death sentence of the eight prisoners and they received long prison terms instead. On May 20, it was reported that Somoza's adherents in the National Guard had presented him with a bullet-proof automobile as a token of their esteem. The following month news came from El Salvador that Gen. Pedron Altamirano, one of Sandino's lieutenants, was renewing guerrilla warfare against the Sacasa régime and that the government of El Salvador had balked the plans of a group of unemployed, who sought to cross the border into Nicaragua to join Altamirano.

Another source of discontent in the National

Guard and among government employees was the salary cuts imposed by the Sacasa Government during July in an effort to balance the budget and prevent the weakening of the córdoba on the exchange market. After Congress and the government departments had accepted pay cuts, it was announced that the budget was balanced for the first time in five years. The Exchange Control Commission, established in November, 1931, prohibited the circulation of foreign currency in Nicaragua on Feb. 1, 1935. On May 13 it declared a suspension of all foreign remittances, causing a temporary tie-up of all import and export business. In September the Commission announced that it would give preference in the allocation of exchange to requests for the importation of necessities.

The annual report of the American Collector General of Customs, Col. Irving A. Lindberg, pointed out that Nicaragua was one of the few Latin American countries which had not defaulted in the service of its foreign loans, despite the strain upon Nicaraguan finances imposed by the world depression, the Managua earthquake of 1931, and the withdrawal of the American marines. He reported that an arrangement had been made with the British bondholders' committee for reductions in the rate of interest and in the amount of amortization.

NICKEL. The consumption of nickel throughout the world in 1935 is estimated by the *Northern Miner* as 160,000,000 lb., of which the International Nickel Company sold 125,000,000 lb., Falconbridge 11,000,000 lb., and the rest of the world—New Caledonia, Norway, and others—24,000,000 lb. Canadian production in 1935, as reported by the Dominion Bureau of Statistics, was 139,194,348 lb., as compared with 128,687,340 lb. in 1934. Imports of nickel into the United States totaled 59,771,633 lb. as against 46,749,747 lb. in 1934, and were the highest since the peak of 1929 when the total import was 67,766,666 lb.

NIEHAUS, né'haus, CHARLES HENRY. An American sculptor, died at Cliffside Park, N. J., June 19, 1935. Born in Cincinnati, Ohio, Jan. 24, 1855, he received his early art education at the McMicken School of Design in Cincinnati, and in 1877 entered the Royal Academy at Munich. Upon the completion of his course in 1880, he won the first prize for his sculpture group, "Fleeting Time," and also the prize for any department of art—the first time ever awarded to an American. Returning to America in the following year he was commissioned to do the Garfield Monument in his native city, and this is considered his outstanding work.

The study of classical sculpture now took him to Rome, and his figure "Caestus," modeled at that time, was later purchased by the Metropolitan Museum of Art, New York. The year 1887 brought him back to America and he settled in New York and devoted himself to his work.

A rugged simplicity characterizes Niehaus' work, and his complete mastery of the human form enabled him to conceive and to put into being his ideal and heroic figures. As a result, talent is more forcibly displayed in his monumental works, which are always admirably sculptural in conception, simple and dignified in composition, and of severe purity of line and handling.

Among his better-known works may be mentioned the statues of Hooker and Davenport in the Connecticut State Capitol, Hahnemann in Scott Circle, Washington, considered a fine example of seated statuary, Lincoln at Muskegon and Buffalo, McKinley at Canton, O., General Forrest (eques-

trian) at Memphis; the monuments to Benjamin Harrison at Indianapolis, Beardsley at Bridgeport, and John Paul Jones in Washington; the bronze doors of Trinity Church in memory of John Jacob Astor, a fine example of delicate workmanship; the pediment on the Appellate Court Building in New York; the group, "Mineral Wealth" at the Pan American Exposition, 1901; "The Driller" on the Drake Monument at Titusville, Pa.; and also the monument to Commodore Perry at Buffalo; the statues of Zachariah Chandler and Governor Click at Washington; the Francis Scott Key Memorial in Baltimore (1922); the Soldiers' and Sailors' Memorials in Hoboken, Newark, and Hackensack, N. J.; the gold star memorial in Des Moines; and statues of Henry Clay and Ephraim McDowell in Washington. Also, he did fine portrait busts of Disraeli, Joseph Jefferson, and Rabbi Gustav Gottheil.

His work won him awards at the expositions of Buffalo (1901), Charleston (1902), and St. Louis (1904), and election to the National Academy in 1906.

NIGER, COLONY OF THE. See FRENCH WEST AFRICA.

NIGERIA, ní-jě'ri-a. A British territory in West Africa comprising the Colony (1381 sq. m.; pop. 316,773 in 1933) and the Protectorate (including, for administrative purposes, the British Cameroons mandate—34,081 sq. m.; pop. 781,115) divided into the Northern Provinces (281,778 sq. m.; pop. 11,316,938 in 1933) and Southern Provinces (89,515 sq. m.; pop. 8,129,318 in 1933). Total area, 372,674 sq. miles; total population (1931 census), 19,928,171. The chief towns were Ibadan with 387,133 inhabitants; Lagos (capital), 126,108; Ogbomoshó, 86,744; Kano, 75,914; Iwo, 57,191; Ede, 52,392; Oshogbo, 49,599; Oyo, 48,733; Abeokuta, 45,763; Ilorin, 40,552; Iseyin, 36,805.

Education. In 1933, there were 3268 schools (primary, secondary, and training) with a total enrollment of 196,500 pupils; in addition the 36,506 Koran schools of the Northern Provinces had 209,000 students. The Higher College at Yaba, with courses in medicine, agriculture, engineering, and teaching, was opened on Jan. 19, 1934.

Production. The main products were the same as the export items shown under *Trade* below. During 1934, gold produced totaled 37,500 oz. troy; the output of coal from the government mine at Enugu totaled 259,750 tons. Livestock in the Northern Provinces in 1934, based on the amount of Jangali tax collected, totaled 2,565,551 cattle, 1,490,069 sheep, 4,398,517 goats, 493,060 donkeys, 185,860 horses, 43,947 swine, 1972 camels, and 38 ostriches.

Trade. In 1934, exclusive of specie of £1,204,482, exports were valued at £8,851,199 and included groundnuts (244,886 tons valued at £1,860,267), palm kernels (289,442 tons, £1,590,647), cacao (77,981 tons, £1,290,437), tin ore (7528 tons, £1,243,722), palm oil (112,773 tons, £885,600), hides and skins (£715,491), cotton lint (117,044 cwt., £297,341); imports, exclusive of specie of £71,374, totaled £5,263,766 and consisted mainly of gasoline, kerosene, leaf tobacco, cigarettes, cotton piece goods, salt, and gin. Exclusive of specie, Great Britain supplied 58 per cent of the imports and received 46 per cent of the exports.

Communications. During 1934, 945 ships aggregating 1,791,643 tons cleared the ports. The Nigerian Railway, divided into two main lines, had 1905 miles of single track open line and 268 miles of sidings. Rivers and creeks formed the chief means of transportation; in addition there was an extensive system of roads.

Finance. For the year ended Mar. 31, 1934, including the Nigerian Railway, revenue amounted to \$6,750,407 and expenditure to \$6,898,816. Public debt on Sept. 30, 1934, was £27,822,582 against which the sinking funds totaled £4,915,225. The revised estimates for 1934-35, exclusive of railway figures but including the railway net deficit, show revenue of £4,376,002 and expenditure of £4,702,740.

Government. Nigeria is under the control of a governor aided by an executive council, and a legislative council which legislates only for the Colony and Southern Provinces but must sanction expenditure made from funds of the central government incurred in the Northern Provinces. Laws for the Northern Provinces are enacted by the Governor and Commander-in-Chief (Sir B. H. Bourdillon, appointed during June, 1935).

NITRATE. See CHILE.

NOBEL PRIZES. The Nobel Prizes for 1935 were presented in Stockholm by King Gustaf on December 10 to the following persons who, in accordance with the will of Alfred Nobel, Swedish inventor and philanthropist, were considered to have made the greatest contributions toward the progress of the world and the welfare of mankind. Hans Spemann (medicine), James Chadwick (physics), and Frederick Joliot and his wife, Irene Joliot Curie (chemistry). No awards were made in literature nor peace for the year. The awards in physics and chemistry are determined by the Royal (Swedish) Academy of Science; in medicine by the Caroline Institute (the faculty of medicine in Stockholm); in literature, by the Swedish Academy; and the peace awards by the Norwegian Storting. The value of the 1935 awards amounted to about \$42,000 each.

The award in medicine to Dr. Hans Spemann was in recognition of his discoveries in connection with embryonic evolution. Born in Stuttgart, June 27, 1869, he is professor of zoology at the University of Freiburg in Breisgau. His achievements have been mainly in experimental biology, resulting in the full development of frog's eggs, without fecundation, by mechanical and chemical stimulation.

Dr. James Chadwick, recipient of the award in physics, was born in Liverpool in 1891, and is assistant director of radioactive research at the Cavendish Laboratory, Cambridge, Eng. The award was in recognition of his discovery of the fundamental neutral particle, the neutron. Dr. Chadwick had been previously honored for this discovery in receiving the Hughes medal of the Royal Society in 1932.

The award in chemistry to Dr. and Mme. Joliot was made because of their pioneer success in making simple elements artificially radioactive. Mme. Joliot, better known as Irene Joliot Curie, is the daughter of Pierre and Marie Curie, joint discoverers of radium, for which they received the Nobel prize in physics in 1903. Mme. Curie, after the death of her husband, continued her researches and again received a Nobel prize, in chemistry, in 1911, for the isolation of radium.

NON-FEDERATED MALAY STATES.

See UNFEDERATED MALAY STATES.

NORMANDIE. See FRANCE under *Shipping*.

NORRIS DAM. See TENNESSEE.

NORTH CAROLINA. Population. On Apr. 1, 1930 (Fifteenth Census), 3,170,276; July 1, 1934 (latest Federal estimate), 3,301,000; (1920 Census), 2,559,123. Charlotte (1930), 82,675; Raleigh (the capital), 37,379.

Agriculture. The accompanying table shows

the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Tobacco	1935	624,000	561,060,000*	\$117,461,000
	1934	495,000	417,975,000*	119,155,000
Cotton	1935	932,000	585,000 ^b	33,199,000
	1934	951,000	629,000 ^b	38,741,000
Corn	1935	2,489,000	49,780,000	37,335,000
	1934	2,440,000	47,580,000	40,919,000
Hay (tame) ...	1935	743,000	652,000 ^c	9,519,000
	1934	765,000	699,000 ^c	12,932,000
Peanuts	1935	238,000	273,700,000*	8,758,000
	1934	248,000	272,800,000*	9,548,000
Potatoes	1935	83,000	9,130,000	6,391,000
	1934	92,000	10,672,000	6,510,000
Sweet potatoes .	1935	80,000	8,000,000	5,600,000
	1934	82,000	8,856,000	6,376,000
Wheat	1935	460,000	5,198,000	5,146,000
	1934	434,000	4,340,000	4,600,000
Oats	1935	215,000	4,730,000	2,649,000
	1934	207,000	3,519,000	2,287,000

* Pounds. ^b Bales. ^c Tons.

Education. The public schools were all kept open for a minimum of eight months in the year 1934-35. Teachers' salaries continued to be low, but in 1935-36 a 20 per cent increase was granted.

For the academic year 1933-34, the number of persons of school age inhabiting the State was reported as 1,090,287. During 1934-35 some 892,631 pupils were enrolled in the public schools. Of these, 736,138 were in common schools or elementary grades, and 156,593 were in high schools. The year's expenditures for 1933-34 for public-school education were: current \$18,296,364; total (including capital outlay), \$19,238,773. Again, the totals of expenditure ran sharply below those for preceding years. The salaries of teachers, for the year, averaged \$578.88.

Charities and Corrections. The State government, under the system in force in 1935, maintained a central supervisory authority over the State and county institutions for the care or confinement of individuals. The supervisory body was the Board of Charities and Public Welfare. This board, composed of seven unpaid members, was correlated with an executive head, the Commissioner of Public Welfare (Mrs. W. T. Bost). Under the Commissioner were three main divisions, of Child Welfare, of Institutions and Corrections, and of Mental Hygiene. The Board had duties of organization and oversight of county welfare units, the promotion of a specific programme of children's welfare, and the interpreting of State plans of welfare to Negro citizens.

The employment of convicts at work on roads, a feature of the penal system, was further modified as to method in 1935. Men sentenced to prison for 30 days or longer, some 8300 for 1935, were under the control of the Highway and Public Works Commission, with which a formerly separate State Prison Department had been merged. The support accorded to the destitute unemployed was dispensed by a State Emergency Relief Commission.

Some 25,000 inmates were distributed among the following State institutions: State hospitals (mental) at Goldsboro, Morganton, and Raleigh; Caswell Training School (mental defectives), at Kinston; Orthopedic Hospital, at Gastonia; State Sanatorium, at Sanatorium; School for the Deaf and Blind, Raleigh; School for the Deaf, Morganton; for juvenile delinquents—Eastern Carolina Training School at Rocky Mount, Stonewall Jackson Manual Training School at Concord, State Home and Industrial School for Girls at Samcand, Morrison Training School at Hoffman, and Industrial School for Girls at Efland; for criminals, apart from those under the Highway Com-

mission—the State Industrial Farm Colony for Women at Kinston; for the aged—Confederate Soldiers' Home, at Raleigh, and Confederate Women's Home, at Fayetteville.

Legislation. The Legislature set the rate of the sales tax on retailed merchandise at 3 per cent, extending it to foods but exempting fresh milk. It authorized the Governor to set up a system of insurance against unemployment, through a fund, in accordance with the Federal provisions for contribution to such insurance. After long dispute over the issue of ending the State's prohibition of traffic in alcoholic beverages, the legislators made a hasty final compromise; a law was enacted to permit any or all of 17 counties to authorize the traffic by referendum, to permit limited purchase of liquor, by each citizen in all these counties but one, even without the authorization of a referendum, yet creating no local or State power to tax the liquor traffic and no adequate system for restricting it to the specified areas.

Political and Other Events. The legislation on liquor, noted above, resulted from strong evidences of a shift in some parts of the State, away from the heavily prohibitionist vote of 1933. The economic position of the State, largely by reason of advantageous markets for the crop of tobacco produced in 1934, made sharp improvement. The price of tobacco fell to 18 cents a pound, however, in September, for the new crop, as against 27 cents a year before; this was ascribed to the AAA's having increased the permissible acreage for 1935.

The State's system of setting up convict camps to perform such tasks as road labor incurred criticism on account of flagrant instances of cruelty in the treatment of Negro prisoners. Two prisoners were reported at Charlotte to have been chained to doors for eight or ten hours at a stretch, and to have contracted gangrene of the legs, necessitating amputation. The *Charlotte News* having published this information late in March, the accused prison guards were arrested in April, on indictments of assault with intent to kill. See *DUST STORMS*.

Officers. The chief officers of the State, serving in 1935, were: Governor, J. C. B. Ehringhaus; Secretary of State, Stacey W. Wade; Treasurer, Charles M. Johnson; Auditor, Baxter Durham; Attorney-General, Dennis G. Brummitt; Superintendent of Public Instruction, Clyde A. Erwin.

Judiciary. Supreme Court: Chief Justice, Walter P. Stacy; Associate Justices, Michael Schenck, Heriot Clarkson, George W. Connor, W. J. Brogden.

NORTH CAROLINA, THE UNIVERSITY OF. A State institution for the higher education of men and, with restrictions as to admission, of women in Chapel Hill, N. C., founded in 1795. The enrollment in the autumn of 1935 was 2788, of whom 2499 were men and 289 women. In correspondence and extension courses 2072 were registered. The residence faculty numbered 220. The Department of History and Government was divided into the Department of History, headed by Dr. A. R. Newsome, and the Department of Political Science, headed by Dr. W. W. Pierson, Jr.; the College of Liberal Arts and the School of Applied Science were united under the title of College of Arts and Sciences, with Dr. A. W. Hobb as Dean. Other faculty additions during the year were: Dr. Edward Mack, head of the chemistry department, and Dr. A. E. Zucker, head of the German department. The endowment amounted to approximately \$2,000,000 and the budget for the year was \$1,366,-

177. The library contained 248,000 volumes. President, Frank Porter Graham, LL.D.

NORTH CENTRAL COLLEGE. A coeducational institution of higher learning at Naperville, Ill., founded in 1861. In the autumn of 1935 there was an enrollment of 520 students, of whom 324 were men and 196 women. There were 36 members on the faculty. The productive funds amounted to \$947,940, and the current income for the year was \$203,450. Gifts included a total of \$16,187 for endowment and permanent equipment. The library contained more than 20,000 volumes. President, Edward Everett Rall, Ph.D.

NORTH DAKOTA. Population. On Apr. 1, 1930 (Fifteenth Census), 680,845; July 1, 1934 (latest Federal estimate), 688,000; 1920 (Census), 646,872. Bismarck, the capital, had (1930) 11,090 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Wheat	1935	8,040,000	53,772,000	\$49,692,000
	1934	3,782,000	21,196,000	20,721,000
Hay (tame)	1935	951,000	1,295,000*	5,180,000
	1934	1,093,000	435,000*	5,916,000
Corn	1935	1,205,000	21,690,000	9,760,000
	1934	1,401,000	4,904,000	4,414,000
Barley	1935	2,351,000	45,558,000	12,301,000
	1934	791,000	7,119,000	4,271,000
Oats	1935	2,183,000	54,575,000	10,915,000
	1934	766,000	8,886,000	4,088,000
Potatoes	1935	135,000	13,500,000	5,400,000
	1934	132,000	5,940,000	3,326,000
Flaxseed	1935	1,005,000	6,030,000	8,744,000
	1934	268,000	938,000	1,557,000
Rye	1935	911,000	12,754,000	3,571,000
	1934	198,000	1,030,000	670,000

* Tons.

Education. There were enrolled, in the year ended with June 30, 1934, 160,699 pupils in the public schools. Of these pupils, 128,007 were in the elementary grades or common schools, and 32,523 were in high schools. The expenditures of the year for public-school education in the State totaled \$9,538,569, of which \$873,782 was for service of debt. The salaries of all the 6433 teachers averaged, for the academic year 1933-34, \$73.66 a month. A State act of 1935 set up a State equalization fund, which with the already existing permanent school fund rendered the State the provider of one-fourth of the cost of the public schools.

Charities and Corrections. The aggregate population of seven institutions maintained by the State for the care or confinement of individuals, as reported in November, 1935, was 3436. Jurisdiction over these institutions was exercised by a State Board of Administration, composed of five members. Two of these served *ex officio* and three by appointment. The same Board conducted the State's educational institutions and had charge of the State Capitol and other property of the State. It had under it a Child Welfare Department, headed by a superintendent, to conduct State activities on behalf of minors.

The State's eleemosynary and correctional institutions were: School for the Deaf, at Devil's Lake; School for the Blind, Bathgate; Tuberculosis Sanatorium, Dunseith; Grafton State School, Grafton; Hospital for the Insane, Jamestown; State Training School, Mandan; State Penitentiary, Bismarck.

Legislation. A tax on retail sales, at the rate of 2 per cent of the price of the goods sold, was enacted. The tax was to go into effect on May 1. The proceeds of the tax were assigned to support for

the needy unemployed and to aid for the public schools, in equal proportions.

Political and Other Events. The State's new sales tax was approved in a referendum at a special election held on July 15. A similar law had been voted down in a referendum held in 1933.

The State benefited by much better crops in 1935. In consequence its economic position improved greatly, as compared with that of 1934. In that year, as was reported by the FERA, \$12,471,487 was spent for the support of the destitute unemployed, not to count certain special Federal expenditures to aid drought-stricken farmers; the FERA paid \$11,469,560 of the total, or 92 per cent, the State nothing, and its subdivisions \$1,001,927.

Ex-Governor Langer's partisans, seeking to open the way for his recovery of the office from which he had been removed, supported a plan for the removal of Governor Thomas H. Moodie, who had been elected in 1934 and inaugurated in January. A suit in *quo warranto* was brought before the State Supreme Court, questioning Moodie's title to the office on the ground that he had not resided in the State for five years and was therefore disqualified under a provision of the State constitution, inserted in the early years to shut out "carpet-baggers." The Court ruled that Moodie was not the lawful Governor and that the office devolved on Lieutenant-Governor Walter Welford. Welford assumed office, considered to that time a faithful supporter of Langer, he failed however to make way for the latter's plans to be reelected.

Langer carried to the Federal Circuit Court at St. Paul his appeal from his Federal conviction. That court set aside the conviction on May 7 and ordered the case against Langer to be retried.

Officers. The chief officers of the State, serving in 1935, were: Governor (acting), Walter Welford; Lieutenant-Governor, Walter Welford; Secretary of State, James D. Gronna; Auditor, Berta E. Baker; Treasurer, John Gray; Attorney-General, P. O. Sathre; Superintendent of Public Instruction, Arthur E. Thompson.

Judiciary. Supreme Court: Chief Justice, John Burke; Associate Justices, A. M. Christianson, A. G. Burr, James Morris, W. L. Nuessle.

NORTH DAKOTA, UNIVERSITY OF. A State institution of higher education for men and women at University Station, Grand Forks, N. D., founded in 1883. The enrollment for the autumn of 1935 was 1675. The 1935 summer session had an attendance of 402. The faculty numbered 125. The income, derived from State appropriations, land grant funds, student fees, etc., amounted to approximately \$412,000. The library contained 96,019 catalogued volumes. The name of the college of liberal arts was changed to college of science, literature, and arts. President, John C. West, Ed.D.

NORTH-EAST NEW GUINEA. See NEW GUINEA, TERRITORY OF.

NORTHERN RHODESIA. See RHODESIA, NORTHERN.

NORTHERN TERRITORY (AUSTRALIA). A Territory of Australia. Area, 523,620 sq. miles; population (Mar. 31, 1935), 5061 exclusive of 19,424 (1933 census) aboriginals (18,643 full-blood and 781 half-caste). Capital, Darwin (1600 inhabitants on Jan. 1, 1935).

Production. Agricultural production was small but livestock rearing was important. Livestock in the Territory (Jan. 1, 1934): 859,867 cattle, 33,590 horses, 20,622 goats, 18,000 sheep, and 397 swine. Mineral output for 1934 was valued at £29,599 of

which tin represented £9566 and gold, £8124 (£ Australian averaged \$4.0095 for 1934).

Government. The territory was governed by an administrator aided by a deputy administrator at Stuart (Alice Springs), and was represented in the Australian House of Representatives by an elected member who took part in the debates but did not vote. Administrator, R. H. Weddell.

NORTHWESTERN UNIVERSITY. A coeducational institution of higher learning in Evanston and Chicago, Ill., founded in 1851. It is composed of a college of liberal arts, a graduate school, and schools of engineering, commerce, journalism, music, education, and speech in Evanston; and schools of law, medicine, dentistry, commerce, and journalism in Chicago. For the autumn term of 1935 there was an enrollment of 5840 full-time and 6931 part-time students. In the 1935 summer session 2870 students were enrolled. The faculty included 716 persons of the rank of instructor or above. The endowment as of June 30, 1935, was \$21,200,000, yielding \$983,000 in income; the total income for the fiscal year was \$3,775,000. In the various libraries of the university there were approximately 500,000 bound volumes and 200,000 pamphlets. President, Walter Dill Scott, Ph.D.

NORTHWEST TERRITORIES (CANADA). A vast area north of the Prairie Provinces and Hudson Bay, and east of the Yukon Territory; provisionally divided, for administrative purposes, into the districts of Mackenzie (527,490 sq. m.), Keewatin (228,160 sq. m.), and Franklin (554,032 sq. m.). Total area, 1,309,682 sq. miles; population (1931), 9723, including 4670 Eskimos and 4046 Indians.

Production. The value of the 229,665 pelts of fur-bearing animals taken in the year ended June 30, 1934, was \$1,505,077 of which white fox accounted for \$941,258. During March, 1935, the Department of the Interior at Ottawa reported that 2398 reindeer, which left the Kotzebue Peninsula, Alaska, over five years ago, had been delivered to the Kittigazuit reindeer station on the east side of the Mackenzie River. The government planned to teach the Eskimos how to raise reindeers. In 1934, 3100 milligrams of radium, 27,000 lb. of uranium salts, and 31,000 oz. of silver were produced by the refinery at Port Hope, Ontario, from pitchblende ore mined at Great Slave Lake in the Northwest Territories.

Government. For the year ended Mar. 31, 1934, expenditure for the government of the Territories totaled \$379,973. The Territories were governed from Ottawa by a commissioner, a deputy commissioner, and 5 councilors (all appointed by the Governor-General in Council).

NORWAY. A constitutional monarchy of northern Europe. Capital, Oslo. Sovereign in 1935, King Haakon VII, who was elected by the Storting (parliament) Nov. 18, 1905.

Area and Population. Norway has an area of 124,587 square miles (land area, 119,148 sq. miles) and a population estimated in 1934 at 2,871,000 (2,814,194 at the 1930 census). Living births in 1934 numbered 42,442; deaths, 28,120; marriages, 19,144. There were 406 emigrants in 1933. The leading cities, with their 1930 populations, were: Oslo, 253,124; Bergen, 98,303; Trondheim (Nidaros), 54,458; Stavanger, 46,780; Drammen, 25,493. The national church is Lutheran. The school enrollment in 1931-32 was: Elementary, 402,539; secondary, 23,943; university, 5164.

Production. In 1930 about 32 per cent of the population was engaged in agriculture and forestry,

28 per cent in industry, 20 per cent in commerce and transport, and 7 per cent in fishing and whaling. Only 3,888,000 acres, or 5.2 per cent of the total area, is arable. In 1934 there were about 1,924,000 acres under cultivation, 549,000 acres of meadow, and 18,531,000 acres of forest. Production of the chief crops in 1934 was: Wheat, 1,204,000 bu.; rye, 395,000 bu.; barley, 5,307,000 bu.; oats, 12,146,000 bu.; potatoes, 29,414,000 bu. Livestock in 1934 included 1,294,497 cattle, 1,697,698 sheep, 550,000 swine, 181,325 horses, and 337,697 goats. The fish catch in 1934 was valued at 59,400,000 crowns (cod-fish, 24,100,000 crowns). Whale oil production for the 1934-35 season was 1,158,436 bbl. (1,186,942 in 1933-34) and the value was about 100,000,000 crowns (75,000,000 in 1933-34).

Mineral production in 1934 was valued at 24,779,000 crowns. Mine and factory production in 1933 was (in metric tons, except as stated): Pyrites, 865,576; iron ore, 473,863; silver, 7850 kilograms; feldspar, 11,343; pig iron, 29,251; ferro-alloys, 90,110; aluminum, 15,384; zinc, 44,948; mechanical wood pulp, 629,873; chemical wood pulp, 298,080; paper, 695,044,000 lb.; margarine, 106,145,000 lb.; beer, 10,530,000 gal.

Foreign Trade. General imports in 1934 were valued at 737,207,000 crowns (665,217,000 in 1933) and exports of Norwegian products at 569,997,000 crowns (549,783,000 in 1933). The percentage distribution of the general imports in 1934 by principal sources of supply was: United Kingdom, 22.9; Germany, 19.1; Denmark and Sweden, 16.5; and United States, 8.6. The United Kingdom took 24.3 per cent of all exports; Germany, 13.7; Denmark and Sweden, 11.5; and the United States, 9.6. The leading 1934 imports were iron and steel, mineral oils and greases, nonferrous metals, ships, coal, machinery, yarn, and cordage. The chief exports were (in 1000 crowns): Wood pulp, 11,984; fish and shellfish, in bulk, 10,596; Norway saltpetre, 6649; newsprint and other paper, 8378; aluminum, 3566.

In 1935, imports totaled 820,800,000 crowns; exports, 605,118,000 crowns. United States imports from Norway totaled \$16,500,717 (\$16,946,233 in 1934); United States exports to Norway, \$13,624,373 (\$11,231,813 in 1934).

Finance. The budget estimates for the fiscal year ending June 30, 1936, balanced at 436,950,000 crowns. Preliminary returns for 1934-35 showed receipts of 409,239,000 crowns, expenditures of 393,746,000 crowns, and a surplus of 15,493,000 crowns. In 1933-34 receipts were 376,588,000 crowns and expenditures 366,375,000 crowns. The public debt on June 30, 1934, totaled 1,526,000,000 crowns (domestic, 809,500,000; foreign, 716,500,000). The crown (krone), with a par value of \$0.4537 in 1935, exchanged at an average of \$0.18 in 1932, \$0.2143 in 1933, and \$0.2532 in 1934.

Communications. Railways on June 30, 1934, had 2407 miles of line (state, 2178; private, 229). In the preceding year they carried 17,794,000 passengers and 5,799,000 metric tons of freight, the gross receipts totaling 69,971,000 crowns. Highways on June 30, 1933, extended 24,106 miles. An air line connected Oslo with Gothenburg and Copenhagen. The Norwegian merchant marine ranked fourth among the world's fleets, having an aggregate tonnage of 3,968,000 on June 30, 1935. The net tonnage of vessels in the overseas trade entering the ports of Norway in 1934 was 4,393,000 (4,264,000 in 1933).

Government. Executive power is vested in the King, who acts through a cabinet responsible to the Storting (parliament). The Storting consists

of 150 members, elected for three years by universal male and female suffrage. When assembled, the Storting divides itself into the Lagting and Odels-ting, comprising one-fourth and three-fourths of the membership, respectively. The two sections function much as do the upper and lower houses of a bicameral parliament. Premier in 1935, J. L. Mowinckel (Liberal).

History. Norway's radical Labor party assumed charge of the government for the second time in history on Mar. 20, 1935, after the Agrarians had deserted the anti-Labor front established by the bourgeois parties in 1933 and joined with Labor to overthrow the Liberal ministry headed by Johan Ludwig Mowinckel. Premier Mowinckel was defeated in Parliament, 94 to 55, as a result of his stand against increased taxes. The new Labor Government was headed by Johan Nygaardsvold as Premier and Minister of Public Works. Other members were: Finance, Adolf Indrebo; Social Affairs, K. O. Bergsvik; Foreign Affairs, Halvdan Koht; Justice, Trygve Lie; Ecclesiastical Affairs and Education, Nils Hjeltnet; Commerce, Alfred Madsen; Defense, Fredrik Nonsen; Agriculture, Hans Ystgaard.

The first Labor Government, established in 1928, lasted only two weeks after it attempted to put into effect its programme of Marxian socialism. In 1935, as in 1928, Labor was curbed by its lack of a majority in Parliament. Dependent upon the support of the more conservative Agrarian party, Premier Nygaardsvold announced on March 21 that he would not attempt to inflate the currency and would keep the budget balanced. The budget was kept in equilibrium by a heavy increase in taxation. The budget estimates for 1935-36, as approved by the Storting in June, balanced at 436,950,000 crowns as compared with the estimates of 395,900,000 crowns in 1934-35. The increased expenditures were allotted largely for the relief of the fisheries, agriculture, and labor. To raise these additional funds, a new general sales tax of 1 per cent went into effect July 1, 1935. In September the Storting added a 2 per cent tax to the State tax of 6 per cent, and levied a crisis tax on corporations of 2 per cent, making the total tax 10 per cent. Individual income taxes were raised an average of 30 per cent on incomes up to 20,000 crowns and slightly less on larger incomes.

Despite some uneasiness aroused in conservative circles by the Labor Government's policies, the improvement in economic conditions inaugurated in 1934 continued during 1935, particularly in the last half of the year. The revival of domestic business was widespread and evenly maintained. Shipping activity increased notably and the Antarctic whaling expeditions had a successful season, with markedly better prices for whale oil. Earnings of the other fisheries increased by approximately 8,000,000 crowns to 67,000,000 crowns. Agriculture enjoyed its best year since 1929. The unsatisfactory condition of the forest industries was remedied somewhat by the quota agreement covering exports of pulp arranged between producers in Norway, Sweden, and Finland. There was a further increase in foreign trade, due partly to new or supplemental trade agreements concluded during 1935 with Poland, Italy, France, Denmark, Brazil, and Cuba.

For the annual conferences of the Foreign Ministers of the Scandinavian States, see DENMARK and SWEDEN under *History*.

NORWEGIAN LITERATURE. See SCANDINAVIAN LITERATURE.

NOTRE DAME, UNIVERSITY OF. A Roman Catholic institution at Notre Dame, Ind., founded in 1842 for the higher education of men. The enrollment in the summer session of 1935 was 694, of which number 476 were religious, sisters of religious communities being permitted to attend. The enrollment for the first semester of 1935-36 was 2751. The faculty numbered 210. The endowment amounted to \$1,010,000, while the income for the year 1934-35, including student fees and departmental income, was \$1,341,348. The library contained 170,140 volumes. President, the Rev. John F. O'Hara, C.S.C., Ph.B.

NOVA SCOTIA, *nō'va skō'shya*. A Province of Canada. Area, 21,428 sq. miles; population (1935 est.), 527,000 compared with 512,846 (1931 census). During 1934 there were 11,310 births, 6008 deaths, and 3751 marriages. Chief towns (with 1931 populations): Halifax, the capital (59,275), Glace Bay (20,706), Dartmouth (9100), New Glasgow (8858). During 1935 there were 3286 departments in 1895 school buildings with 116,798 students enrolled including 17,076 of high school grade. The Province had nine universities and colleges.

Production. The estimated total value of field crops for 1935 was \$12,179,000 (\$12,995,000 in 1934) of which hay and clover (592,000 tons) represented \$6,512,000; potatoes (104,300 tons), \$2,086,000; turnips, etc., (166,850 tons), \$1,669,000, oats (3,100,000 bu.), \$1,488,000. The apple crop for 1935 was estimated at over 1,750,000 barrels. Livestock in 1934: 244,400 cattle, 145,300 sheep, 41,900 horses, and 41,600 swine. Fish production (1934) was valued at \$7,673,865 including lobsters, \$2,487,633; cod, \$2,068,566; haddock, \$1,042,000. Fur production (1933-34) amounted to 43,429 pelts valued at \$550,699 of which silver fox (11,007 pelts) represented \$456,791.

Mineral production (1934) was valued at \$23,310,000 of which coal (6,341,625 tons) accounted for \$21,860,000; gold (3525 fine oz.), \$121,613; gypsum (378,287 tons), \$488,044; salt (42,886 tons), \$191,917. Mineral production (1935): coal (5,822,180 short tons), \$20,161,403; gold (7967 fine oz.), \$280,359. During 1933, from the 1378 factories, employing 13,260 workers, the net value of products was \$27,499,505.

Government. The end of the fiscal year was changed to November 30. For the 14-month period ended Nov. 30, 1935, revenue amounted to \$10,640,860; expenditure, \$11,156,001; funded debt (Dec. 2, 1935), \$82,167,980; sinking funds, \$5,767,759. Government was vested in a lieutenant-governor and a house of assembly of 30 members (in 1935, 22 Liberals and 8 Conservatives) elected for five years by popular vote. The Province was represented in the Dominion Parliament at Ottawa by 10 Senators and 12 members in the House of Commons (at the Dominion general election of Oct. 14, 1935, 12 Liberals were elected). Lieutenant-Governor in 1935, W. H. Covert; Premier, A. L. Macdonald (Liberal).

NYASALAND (*nyā'sā-lānd'*; *nī-ās'a-*) **PROTECTORATE.** A British protectorate in East Africa. Land area, 37,596 sq. miles; population (1934), 1,603,914 including 1800 Europeans and 1401 Asiatics. The main settlements were Zomba, the capital (3000 inhabitants), Blantyre (6000), Limbe, Fort Johnston, Karonga, and Livingstonia.

Production and Trade. Coffee, tobacco, cotton, and tea were the main products. Livestock in the protectorate (1933): 198,082 cattle, 241,765 goats, 85,225 sheep, 69,682 swine. In 1935, exclud-

ing government stores and specie, imports totaled £601,390; exports, £754,824 of which tobacco represented £290,933; tea, £223,876; cotton, £204,851.

Government. For 1934, revenue totaled £560,552; expenditure, £571,674. Budget estimates (revised) for 1935 were balanced at £607,871. The protectorate was administered by a governor, aided by an executive council and a legislative council. Governor and Commander-in-Chief in 1935, Sir H. B. Kittermaster.

OATS. The 1935 production of oats in 29 countries reporting to the International Institute of Agriculture was estimated at 3,173,576,000 bu., 29.4 per cent more than the 2,453,289,000 bu. these countries produced in 1934 and only 1 per cent less than the average production for the five years 1929-33. The acreage reported, 92,986,000 acres, was 10.2 per cent above that of 1934 and 1.8 per cent below the average for the five-year period. The production of the leading countries, exclusive of the United States, the Soviet Republics, and countries of the southern hemisphere, was reported as follows: Canada 442,392,000 bu., Germany 369,967,000 bu., France 317,484,000 bu., Poland 176,727,000 bu., and Sweden 83,362,000 bu. The production of the Soviet Republics in 1933 was recorded as 1,061,915,000 bu. and the production of Argentina in the crop-year 1934-35 as 77,850,000 bu.

Estimates by the Department of Agriculture placed the 1935 oats crop of the United States at 1,195,435,000 bu. produced on 39,714,000 acres and at the rate of 30.1 bu. per acre. The crop was more than double the low yield of 525,889,000 bu. in 1934 but about 2 per cent below the average of 1,217,646,000 bu. for the five years 1928-32. The West North Central States produced over three-and-one-half times their crop in 1934 and the increase of 7,590,000 acres in that section over the 1934 area harvested mainly accounted for the increased acreage for the entire country. The yield per acre was two-tenths of a bushel below the five-year average and compared with 17.4 bu. in 1934 and 19.9 bu. in 1933. The average farm price toward the close of the calendar year was 27.9 cents per bushel compared with 41.9 cents, the average price received by farmers during the crop marketing season of 1934. On this basis the total value of the two crops was \$333,960,000 and \$252,157,000 respectively.

Oats were grown in all the States and the yields of those leading in production were estimated as follows: Iowa 205,137,000 bu., Minnesota 181,189,000 bu., Illinois 107,716,000 bu., Wisconsin 85,702,000 bu., and Nebraska 75,980,000 bu. During the fiscal year ended June 30, 1935, the United States exported 377,000 bu. of oats and 943,000 lb. of oatmeal and flaked and rolled oats in bulk and 12,909,000 lb. in packages. The imports for the period amounted to 9,321,000 bu. as compared with 131,000 bu. in the preceding fiscal year. As reported by the International Institute of Agriculture 13 exporting and 15 importing countries exported 71,744,000 bu. and imported 79,429,000 bu. during the marketing year Aug. 1, 1934, to July 31, 1935. The United States during this period exported 468,000 bu. and imported 15,074,000 bu.

OBERLIN COLLEGE. A nonsectarian institution for the higher education of men and women in Oberlin, Ohio, founded in 1833. The registration for the first semester of 1935-36 was 1672, while that for the summer session of 1935 was 127. The faculty had 181 members. The productive funds of the institution as of Aug. 31, 1935, amounted to \$18,149,822, and the income for the year was \$1,118,234. The library contained 366,396 bound and 225,374

unbound volumes. President, Ernest Hatch Wilkins, Ph.D., Litt.D., LL.D.

OBITUARY RECORD OF THE YEAR.

See NECROLOGY.

OCEANIA, FRENCH ESTABLISHMENTS IN. A French colonial possession in the Pacific, consisting of the following main groups of islands: Society, Marquesas, Tuamotu, Leeward (Iles sous le Vent), Gambier, Tubuai, and Rapa. Total area, 1520 sq. miles; population (1931 census), 40,392 including 29,757 natives. The main island was Tahiti (600 sq. m.; 16,781 inhabitants in 1931) of the Society Islands. Capital, Papeete (7061 inhabitants).

Production and Trade. Copra, sugar, rum, phosphates, bananas, oranges, mother-of-pearl, and vanilla were the chief products. In 1934, imports were valued at 20,133,000 francs; exports, 16,879,000 francs (franc averaged \$0.0657 for 1934).

Government. For 1933, revenue and expenditure were estimated to balance at 15,400,000 francs. The establishments were administered by a governor aided by an administrative council. Governor, Michel-Lucien Montagne.

OCHS, öks, ADOLPH S (IMON). An American publisher, died in Chattanooga, Tenn., Apr. 8, 1935. Born in Cincinnati, Mar. 12, 1858, he received his education in the common schools of Knoxville, Tenn., whither his family had moved in 1865. At the age of 11 he was a newsboy and later a printer's apprentice on the Knoxville *Chronicle*, serving until 1873, when he became a printer and compositor on various newspapers. Anticipating the growth of Chattanooga, he conceived the idea of establishing a newspaper there, but was forestalled by Frank M. Paul, then business manager of the Knoxville *Tribune*, whose assistant he was. Paul established *The Dispatch*, which failed, and Ochs, left behind as receiver of the paper, issued a city directory and established himself in the city.

He was then offered the Chattanooga *Times* for \$800 and the assumption of the paper's debts, about \$1500. Not having any such sum, he borrowed \$250 and was able to purchase a half interest, also assuming the debts. So valuable had the paper become within two years, that he paid off the debts and purchased the remaining half interest for \$5500. The strides he made were so rapid, and so closely was the paper connected with the city's growth that it earned the sobriquet, "The Times—that made Chattanooga," and upon the 50th anniversary of its establishment in 1928, Ochs was given the title "citizen emeritus."

Prior to his purchase of the New York *Times* in 1896, Ochs was offered the New York *Mercury*, but because of his disagreement with its policy, refused it. However, when he was informed that the *Times*, a once influential newspaper, but then rapidly declining, was in the market, and had convinced himself that he was able to handle such an undertaking, he commenced negotiations for its purchase and although beset with difficulties, overcame them, and became owner of the New York *Times*. In the announcement of his ownership made on Aug. 19, 1896, he said he would conduct "a high-standard newspaper, clean, dignified, and trustworthy, for thoughtful, pureminded people." His printing creed, "All the News That's Fit To Print" appeared for the first time on October 25.

Mr. Ochs continued to publish the paper under the political principles laid down by its original editors, and it was classed as Independent Democratic, an advocate of sound money and tariff reform. Under his able guidance, the newspaper

forged steadily ahead and at the time of his death had a daily circulation of 460,000 copies and on Sunday of 725,000 copies. To build up its value and prestige, he employed experts in various fields, purchased the best and newest mechanical equipment, and established national and foreign news bureaus second to none. In 1914 larger quarters were necessary and the new Times Building was erected on West 42nd Street, which section was later named Times Square after the building. Subsequently these quarters were outgrown and a new building was erected in the neighborhood, which in turn had additions built to it. Always up-to-date, the *Times* was the first American newspaper to publish (1914) a pictorial section printed by the perfected rotogravure process, and the first to receive a news service by wireless transmission. In 1918, it received the first Pulitzer Prize Award as "an outstanding example of enterprise in news-gathering," and in 1930 it was awarded the first gold medal of the University of Missouri for setting high standards in journalism.

In 1902, Mr. Ochs purchased the Philadelphia *Times* and the following year, the Philadelphia *Public Ledger*, which he consolidated with the *Times*. This newspaper, the Philadelphia *Public Ledger*, was published by him until 1912, when it was sold to Cyrus H. K. Curtis, the publisher of *The Saturday Evening Post*. Subsequently, Ochs contemplated forming a chain of newspapers, and intended buying the *Herald* from James Gordon Bennett, but Bennett's death put an end to the negotiations and Ochs decided to devote all his time to the *Times* rather than to a string of newspapers.

In addition to publishing the New York *Times*, the New York Times Company also issued *Current History*, a monthly brought into being during the early days of the World War to amplify the war material that could be covered by a daily paper, and continued as a digest of international events at the close of the War; *The Annalist*, a weekly financial review, and *The Mid-Week Pictorial*. In 1913, *The New York Times Index*, a cross-reference of all the stories in the newspaper, was begun.

Other phases of the publishing business were of interest to Mr. Ochs, and in 1926 he gave \$500,000 to the American Council of Learned Societies for the projection of the *Dictionary of American Biography* to be prepared over a period of ten years. Also, in 1928 he subsidized the *American Year Book* in order to insure its yearly publication.

In 1926, he initiated and organized a trust fund of \$5,000,000 for the Hebrew Union College of Cincinnati, which was founded by his father-in-law, and he was one of the founders of the Chattanooga-Lookout Mountain Park. From 1900 he was a director of the Associated Press. Honors came to him from many universities and societies, and in 1919 he was made a Chevalier of the Order of the Legion of Honor, France, and in 1924, an officer. The National Institute of Social Sciences awarded him its gold medal in 1927 for "developing and maintaining high standards of journalism," and in 1931, the Park Association of New York City awarded him its medal for his interest in park systems.

OGLETHORPE UNIVERSITY. An institution of higher education for men, founded in 1913 as a revival of the famous institution which existed in Milledgeville and in Atlanta, Ga., from 1835 to 1872. The enrollment for the autumn term of 1934 was 500. The 1934 summer session had an attend-

ance of 150. There were 31 members on the faculty. The income for the year amounted to \$120,000. The library contained 50,000 volumes. President, Thornwell Jacobs, LL.D., Litt.D.

OHIO. Population. On Apr. 1, 1930 (Fifteenth Census), 6,646,697; July 1, 1934 (latest Federal estimate), 6,836,000; 1920 (Census), 5,759,394. Among the cities, Cleveland (1930) had 900,429 inhabitants; Cincinnati, 451,160; Toledo, 290,718; Columbus, the capital, 290,564; Akron, 255,040.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	3,190,000	133,980,000	\$66,990,000
	1934	2,927,000	92,200,000	70,994,000
Wheat	1935	1,844,000	42,406,000	32,653,000
	1934	1,740,000	33,401,000	29,727,000
Hay (tame) ...	1935	2,373,000	3,196,000*	21,094,000
	1934	2,629,000	2,031,000*	29,043,000
Oats	1935	1,269,000	45,684,000	12,792,000
	1934	1,209,000	25,994,000	12,217,000
Potatoes	1935	121,000	12,826,000	8,337,000
	1934	109,000	11,445,000	6,409,000
Apples	1935	.....	7,952,000	6,044,000
	1934	.....	4,032,000	4,234,000
Tobacco	1935	24,300	21,986,000 ^b	2,203,000
	1934	22,300	24,250,000 ^b	2,674,000

* Tons. ^b Pounds.

Mineral Production. The yearly quantity of coal mined amounted to 20,610,000 net tons (1935) against 20,690,564 (1934). Coal to the quantity of 6,100,949 tons went into byproduct ovens, which yielded 4,296,338 net tons of coke (1934) as against 3,676,727 tons produced in 1933; in value the coke totaled \$19,001,985 (1934) and \$14,540,301 (1933). Nearly three-fourths of the coke of 1934 went into blast furnaces. Charged with ore from other States, these yielded 4,207,944 gross tons of pig iron. The blast furnaces' shipments, slightly lower than the yield in 1934, totaled 4,147,116 tons as against 4,188,142 tons for 1933; in yearly value, \$68,525,145 (1934) and \$60,995,721 (1933). There were produced, in 1934, 1,017,629 gross tons of Bessemer and 5,649,785 of open-hearth steel.

Wells in Ohio continued to yield a moderate supply of petroleum; in 1934 they produced 4,232,000 barrels, a trifle less than the total for 1933. An apparently important new source of natural gas, the Pultney Ridge field in Guernsey County, was developed in 1934. Addition to the production of natural gas in the State was timely, since public utilities not only were taking nearly all the available product of Ohio's wells but were importing about 45 per cent of their yearly requirements. Producers of salt sold or used 1,432,292 short tons in 1934, somewhat exceeding the total, 1,382,294, for 1933. The values of these quantities were \$2,721,167 (1934) and \$2,599,055 (1933). Ohio led the States of the Union in the production of lime; the producers sold some 549,000 short tons in 1934, as against 558,901 in 1933; by value, \$4,153,000 (1934) and \$3,353,102 (1933).

Education. The number of the State's inhabitants of school age was reckoned in 1934 as 1,544,379. In the academic year 1934-35 the enrollments in the public schools numbered 1,296,732. Of these, 954,656 were in common schools or elementary grades, and 342,076 in high schools. The year's expenditures for public-school education throughout the State totaled approximately \$87,000,000. The salaries of teachers, for the year, averaged \$1250.

Charities and Corrections. The Department of Public Welfare, which had been established in

1921, was in 1935 the State agency directing activities for the care and custody of persons. It administered a strongly centralized system of institutional control, operating 22 State institutions that housed among them a daily average population of some 36,243. It had at its head a Director (Mrs. Margaret M. Allman).

The State institutions thus operated were: for the mentally disordered, State hospitals at Athens, Cleveland, Columbus, Dayton, Lima, Cincinnati, Toledo, and Massillon; Ohio Hospital for Epileptics, Gallipolis; institutions for the feeble-minded, at Columbus, Orient, and Apple Creek; Ohio State Sanatorium, Mount Vernon; Ohio Soldiers' and Sailors' Home, Sandusky; Madison Home, Madison; Boys' Industrial School, Lancaster; Girls' Industrial School, Delaware; Ohio Penitentiary, Columbus; Prison Farm, London; Ohio State Reformatory, Mansfield; Ohio Reformatory for Women, Marysville; Bureau of Juvenile Research, Columbus.

Legislation. The regular session of the Legislature passed a budget of appropriations, which Governor Davey vetoed, regarding it as some \$7,000,000 too high. The question of finding revenue out of which to pay the State's share of pensions to the needy elderly inhabitants was left to a later session. The Mort plan, a scheme brought forward by the teaching interests was put before the Legislature, and occupied much of its attention. This plan called for the allotment of certain specific taxes to a fund for distributing \$48,000,000 a year, proportionately to the number of school-children, among school districts having scanty revenues. An effort was made to couple with the plan such provisions as would give the State greater control over the districts receiving and expending the money.

The State's Recovery Act was prolonged by enactment, to remain in effect as long as the NRA, of which it was the State auxiliary; the Governor signed the prolonging act, although the NRA had been declared unconstitutional shortly before.

Political and Other Events. Governor Davey took office in January. He met with difficulty in his endeavor to make the Legislature economize. In March he came into conflict with Federal Relief Administrator Hopkins. Hopkins rejected on March 9 a demand of Davey's that the FERA take over the administration of support for the destitute unemployed in the State. But only a week later, on the 16th, the President, stating that he had "evidence concerning corrupt political interference with relief in the State," directed Hopkins to take entire control. Hopkins, in doing so, charged that a "shakedown" had been effected, among firms selling to the State Relief Administration, in order to produce money to help pay the cost of Davey's political campaign of 1934. Davey had provoked the Federal Administration by previously charging that "the whole Ohio relief job . . . was full of waste and inhumanity." He retaliated on Hopkins by swearing out a warrant against him for criminal libel. C. C. Stillman, on whose responsibility the Federal charges were made, was appointed Federal Relief Administrator for Ohio. The Democratic State committee did not deny receiving alleged contributions, but maintained that there had been no indefensible solicitation.

Governor White, whose term expired early in January, reproduced a political phenomenon familiar in some other States by pardoning, in the last few weeks of his tenure, 76 convicts, including persons convicted of robbery, burglary, arson, or murder.

The Federal Supreme Court, reversing the State Supreme Court, held the low rates imposed on the West Ohio Gas Company invalid as yielding too little return. The State Supreme Court in a decision on June 12 declared the State's Recovery Act unconstitutional. Two former officers of the failed Union Trust Company of Cleveland, W. M. Baldwin and K. V. Painter, were sentenced on July 13 to long terms of imprisonment, for abstracting collateral on a loan to Painter.

The State halted payments of old-age pensions in September, because of the exhaustion of funds for the purpose. The construction of works to check floods in the Muskingum Valley at an anticipated cost of \$30,000,000 was begun by the State on January 5, with promise of \$2,000,000 of funds from State sources, \$22,500,000 from the PWA (part loan and part Federal grant), and \$6,000,000 from levies in the benefited area. Governor Davey, in effecting public economies, cut the biennial budget of Ohio State University by some \$1,200,000; in the resulting controversy, he alluded sarcastically to the cost of the University's activities in football, including State employment for star players.

Floods in the area of Zanesville caused damage estimated at \$5,000,000 on August 9. Strikes occurred at Toledo, in the Chevrolet works in April and in the Toledo Edison Company in June. Cincinnati, the most populous American city operated under a city manager, set its tax rate for the year at \$16.86 per \$1000; \$4.58 less than the previous year's rate. Cleveland, on the other hand, faced a deficit of some \$6,000,000.

Officers. The chief officers of the State, serving in 1935, were: Governor, Martin L. Davey; Lieutenant-Governor, Harold G. Mosier; Secretary of State, George S. Myers; Treasurer, Harry S. Day; Auditor, Joseph Tracy; Attorney-General, John W. Brickner; Director of Education, E. L. Bowsher.

Judiciary. Supreme Court: Chief Justice, Carl V. Weygandt; Associate Judges, Edward S. Matthias, Thomas A. Jones, Roy H. Williams, Will P. Stephenson, Arthur Day, Charles B. Zimmerman.

OHIO NORTHERN UNIVERSITY. An institution for the higher education of men and women at Ada, Ohio, founded in 1871, and under the direction of the Methodist Episcopal Church. The enrollment for the fall quarter of 1935 was 541. The 1935 summer quarter had an attendance of 235. The faculty consisted of 35 members. The productive endowment of the institution, as of June 30, 1935, amounted to \$456,217.58, and the income for 1933-34 was \$137,075.97. The library contained 18,300 volumes. President, Robert Williams, D.D.

OHIO STATE UNIVERSITY. A State institution for the higher education of men and women in Columbus, Ohio, founded in 1870. The enrollment for the Autumn Quarter of 1935 totaled 11,417, distributed as follows: Graduate School, 936; Agriculture, 1096; Applied Optics, 150; Arts and Sciences, 2102; Arts-Education, 71; Commerce and Administration, 2197; Dentistry, 208; Education, 1986; Engineering, 1468; Law, 328; Medicine, 377; Nursing, 12; Pharmacy, 188; Veterinary Medicine, 298. There were in addition 4098 students registered in the Summer Quarter of 1935. The Faculty numbered approximately 975. The endowment amounted to \$1,204,029. The total income for the year was \$6,639,630, while the total expenditures were \$6,392,739. The library contained approximately 445,000 volumes. President, George W. Rightmire, LL.D.

OHIO UNIVERSITY. A State university for the higher education of men and women, founded at Athens, Ohio, in 1804. The student enrollment for the first semester of 1935 was 2500, of whom 841 were in the college of arts and sciences, 608 in the college of education, 892 in the University College, and 159 in evening and Saturday classes. The enrollment for the 1935 summer session of nine weeks was 1296 while that in the post-summer session of three weeks was 123 and the Adult Institute of four weeks was 29. The faculty numbered 229. The library contained more than 100,120 bound volumes. President, Herman G. James, Ph.D., LL.D.

OHIO WESLEYAN UNIVERSITY. An institution for the higher education of men and women in Delaware, O., under the control of the Methodist Episcopal Church, founded in 1844. For the autumn semester of 1935 the total enrollment was 1396. The faculty numbered 116 (an increase of 4). The productive endowment of the university amounted to \$3,556,600 and the income for the year 1934-35 for educational enterprises was \$432,381 and for auxiliary enterprises \$274,393. The library contained 148,132 volumes. President, Edmund D. Soper, D.D., LL.D.

OIL. See CHEMISTRY, INDUSTRIAL AND APPLIED; PETROLEUM.

OKLAHOMA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,396,040; July 1, 1934 (latest Federal estimate), 2,475,000; 1920 (Census), 2,028,283. Oklahoma City, the capital, had (1930) 185,389 inhabitants; Tulsa, 141,258.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934.

Crop	Year	Acreage	Prod. Bu	Value
Cotton	1935	2,383,000	535,000 ^a	\$28,516,000
	1934	2,708,000	317,000 ^a	18,678,000
Wheat	1935	3,308,000	33,080,000	28,449,000
	1934	3,557,000	37,348,000	30,252,000
Corn	1935	2,308,000	31,158,000	18,695,000
	1934	2,117,000	11,644,000	11,528,000
Hay (tame) . .	1935	469,000	651,000 ^b	4,492,000
	1934	444,000	496,000 ^b	6,051,000
Oats	1935	1,430,000	37,895,000	10,990,000
	1934	1,300,000	20,150,000	9,470,000
Grain sorghum .	1935	1,645,000	12,338,000	7,403,000
	1934	1,232,000	7,392,000	6,948,000
Potatoes . . .	1935	40,000	2,840,000	2,130,000
	1934	40,000	2,760,000	1,739,000

^a Bales. ^b Tons

Mineral Production. The production of petroleum diminished to 180,624,000 barrels (1934) from 182,251,000 (1933). This was attributed in part to more effective public restriction of the output but more to the decline of the Oklahoma City field, furnishing more than one-fourth of the State's total; this field yielded some 5,300,000 barrels less in 1934 than in 1933, and was thought to have been harmed by excessive exploitation in its early days. On the other hand many new fields were developed in 1934, and two of these, the Fitts and the South Burbank, added materially to production. About two-thirds of the petroleum produced in 1934 was shipped to refineries outside the State.

No new fields producing natural gas were discovered in 1934, apart from those that produced gas with petroleum; but some 91 new wells driven in old gas fields tended to offset decline in production. The State authorities discouraged the burning of gas to produce carbon black and prohibited stripping the gasoline from gas, save that obtained from petroleum-yielding wells. Nevertheless, 356,500,000 gallons of gasoline were obtained from natural gas in 1934, 1 per cent less than in 1933.

Mines in the State produced in 1934 ore containing 107,772 short tons of zinc, well exceeding the 91,065 tons of 1933; the values of these quantities were \$9,268,392 (1934) and \$7,649,460 (1933). The lead in ore mined in the State totaled 16,747 short tons (1934) and 18,038 (1933); its value, \$1,239,278 (1934) and \$1,334,812 (1933).

Education. The number of the inhabitants of school age was reckoned for January, 1934, as 766,615. Those actually enrolled as pupils in the public schools in the academic year 1933-34 (with which dealt the latest collated data) numbered 665,478. Of these, 541,314 were in common schools or elementary grades (grades from one to eight), and 116,876 were in high schools. The total of expenditures for public-school education in the academic year was \$21,081,200. The salaries of the teachers, for the year, averaged \$882.

The latest legislation, according to the *Journal* of the National Education association, brought the State's share of the expense of the public schools up to 40 per cent. The State was to distribute both on the so-called needed-teacher basis and on that of equalization. Schools were to hold session for eight months a year at least.

Charities and Corrections. The institutions maintained by the State and by its subdivisions, for the care or confinement of persons, under the system in force in 1935, were directed separately; the State's Department of Charities and Corrections exercised the central administrative power, which was chiefly limited to supervision. It had at its head an elected Commissioner (Mabel Bassett). It made yearly inspection both of the State correctional and eleemosynary institutions and of those maintained by the counties and municipalities; and it inspected and licensed, year by year, institutions such as hospitals and orphanages that were not run by public authorities.

Legislation. The regular session of the Legislature authorized an issue of State bonds with which to redeem about \$12,000,000, the total of warrants that had been issued to meet the deficiency of the general fund through the two years ended with June 30. It passed and referred to the popular vote for approval a system of pensions at the rate of 15 dollars a month; and, also, several changes in the State constitution, one of them to abolish the clause forbidding women to hold the higher State offices. It enacted the authorization of a plan for State works to control floods. An appropriation of \$1,500,000 was made for the State's contribution to the cost of supporting the needy unemployed. A tax of three cents a package on cigarettes was imposed.

Political and Other Events. Governor Marland, who took office in January, urged upon the Legislature a scheme of extensive alteration in the scope of the State Government. His proposals included the imposition of income taxes and sales taxes to provide money for the State's contribution toward the support of the destitute unemployed and toward the cost of public schools; the creation of a planning board, a housing board, a board of flood control, and a board of new industries; and an appropriation of \$5,000,000 for the needs of these boards. The Legislature adopted only certain features of the scheme. See DUST STORMS.

A special election held on September 24 rejected a proposed constitutional amendment to permit women to hold the higher State offices. According to unofficial figures the popular vote apparently defeated the Legislature's proposed amendment to exempt homesteads from taxation and adopted an amendment for homestead-exemption that had been

proposed by popular initiative. A proposal to create a system of pensions for the elderly was adopted.

Officers. The chief officers of the State, serving in 1935, were: Governor, E. W. Marland; Lieutenant-Governor, James E. Berry; Auditor, C. C. Childers; Secretary of State, Frank C. Carter; Attorney-General, Mac Q. Williamson; Treasurer, Hubert L. Bolen; Superintendent of Public Instruction, John Vaughan.

Judiciary. Supreme Court: Chief Justice, Edwin R. McNeill; Associate Justices, Wayne W. Bayless, Earl Welch, James I. Phelps, N. S. Corn, Monroe Osborn, Thomas L. Gibson, Orel Busby, Fletcher Riley. Criminal Court of Appeals: Thomas H. Doyle, Thomas A. Edwards, James S. Davenport.

OKLAHOMA, UNIVERSITY OF. A State institution for the higher education of men and women in Norman, Okla., founded in 1890. The enrollment for the autumn of 1935 totaled 5548, of whom 3739 were men and 1809 women. For the summer session of 1935, 1835 students were registered. There were 300 faculty members. The productive funds amounted to \$3,544,170, and the income for 1935-36 was \$1,826,372 (including two hospitals operated by the school of medicine). During the year 1935-36, \$250,000 was appropriated for a Business Administration Building; a PWA grant of \$204,000 was given for a Biological Science Building, and a 46-acre addition was made to the campus. The library contained 166,400 volumes. President, William Bennett Bizzell, Ph.D.

OLD AGE PENSIONS. At the meeting called by the Social Security Board at Washington in mid-December, 1935, the representatives of the several States were told that 39 States now have old age pension laws. This represents an increase of 14 during the year just passed, most of the new ones having come into existence since the passing of the Federal Act. To participate in the Federal funds to be made available, the States must meet certain conditions, chief among them the following.

(a) the plan must be State-wide and mandatory; (b) it must provide for State financial participation on or before July 1, 1937; (c) it must be in the charge of a single State agency and the administration and personnel policies must guarantee "efficient operation"; (d) the State residence requirement must not exceed five years; (e) United States citizens may not be disqualified by a ruling as to length of citizenship; (f) after January, 1940, the age limit must not exceed 65 years; (g) half of the sum recovered by the States from the estates of beneficiaries must go to the Federal government; and (h) the participation of the Federal government is limited to \$15 per month per beneficiary.

An examination of the statutes in effect on Oct. 1, 1935, made by the Federal Emergency Relief Administration for the Social Security Board, which currently lacks funds, disclosed that but 17 State statutes met the Federal requirements. From this it is obvious that a great deal of legislative activity in this field may shortly be expected.

Since payments from Federal funds are not to be available until 1942 a review of the operation of some of the existing State systems is in order. Writing in the *Monthly Labor Review* for August, 1935, Miss Florence E. Parker reported the situation as of 1934. During the year 8 States and 1 Territory were added to the list of governments having such legislation, bringing up to 56 per cent the proportion of the American population having old age protection. However, some statutes were not in effect, the operation of others was severely hampered by the lack of funds and administrative deficiencies; the lack of a mandatory requirement prevented complete coverage of the population

when none of these difficulties was encountered.

During 1934, however, 236,205 persons received pensions, an increase of approximately 120,000 over 1933, or above 100 per cent, but the benefits paid increased only 23 per cent, totaling \$32,313,515, resulting in a decline of the average monthly allowance from \$19.34 to \$14.69, or 24 per cent. It is interesting to note that even in the most liberal States the allowances were only about two-thirds of the legal maximum, 6 States paying allowances of \$20 a month or better and 14 less than \$10, the range being from 69 cents in North Dakota to \$26.08 in Massachusetts. In this connection it is important to note that State-aid or all-State systems were the most liberal in their payments and the smallest allowances were made when the counties bore all the cost. In 1934 about half of the payments made came from State funds. The study concludes that, "Judged by the three criteria of coverage, benefits, and proportion of persons of pensionable age being cared for, the systems of Arizona, Massachusetts, and New York ranked highest in 1934. At the other end of the scale were those of Idaho, Nebraska, Nevada, Utah, and Washington."

Additional sidelights on the operation of the State systems, drawn from various authoritative sources, go to amplify this picture. The Indiana law, which went into effect on Jan. 1, 1934, with a maximum allowance of \$180 a year, the lowest yet established, resulted in 5 counties paying no pensions, 5 paying less than \$3 a month, 30 between \$3 and \$5 a month, and but 6 over \$10, the average payment being \$6.13. The administration was in the hands of the county commissioners, only 14 counties having hired special workers, and of 39,304 applications, 21,769 were granted, with the result that by August, 1934, but 15.7 per cent of the Indiana population over 70 was on the rolls.

The operations in California, Massachusetts, New Jersey, and New York, for the first six months of 1935 have also been reported. The average benefits ranged from \$15.29 in New Jersey to \$24.31 in Massachusetts. All of these States have had a pension system for some time, that of California having been in operation for 5½ years. Yet in none of them has the peak of the load of beneficiaries been reached, it seems, for in California the pensioners are increasing at the rate of 300 a month and in Massachusetts at the rate of 400. A study of the Oregon system, initiated in 1934, showed an average allowance of \$10.64 a month. One out of every 85 men and one of every 250 women in the State applied for a pension and 52 per cent of all were 75 years of age or over. In Iowa, at the end of July, 1935, 10,200 persons were receiving pensions averaging \$13.41 a month and there was an eligible list of 20,000 on file, occasioned by the lack of funds.

From these notes it is obvious that the old age pension systems in operation are far from perfect and that even when brought in line with Federal requirements, they will still not meet the problem. It is, therefore, of the first interest to consider the extent of the problem as determined by the Committee on Economic Security and reported in its *Supplement to the Report to the President*. The population of the United States over 65 in 1930 totaled 6,633,805 of whom one-third were gainfully occupied and another third supported by others in whole or in part. The group will expand rapidly in the years to come, from 5.4 per cent of the population as of 1930 to 12.7 per cent in the year 2000, or from the number of individuals cited to 19,338,-

000. The problem, consequently, is a cumulative one.

It is emphasized in the foregoing analysis that the allowances currently granted are very low and it is at this very point that most of the agitation has centered since the passing of the Federal act. Thoughtful critics are concerned with the matter because the present allowances almost uniformly fall below the level of minimum subsistence. That adequate allowances should exceed that level may be taken for granted. The drive, therefore, is to raise them above that minimum, but this reasonable demand is drowned out by the clamors of the Townsendites whose plan was described, in its original formulation, on page 692 of the 1934 *New International Year Book*.

Townsend Plan. During 1935 the Townsend Plan suffered a mild change and as now presented proposes a \$200 a month allowance for all persons above the age of 60 who are not in gainful employment, do not have an unearned income of \$2400 a year, and have not been convicted of a crime. The Townsendites calculated that this will leave about 8,000,000 individuals eligible for the allowance, and that the total cost will be \$19,200,000,000 a year, the charge to be borne by the Federal government. This vast sum is to be raised by a 2 per cent tax on all commercial transactions, from buying a pound of butter to the purchase of a steel plant. The proponents argue that it is impossible to estimate how the plan will work from any available data, but they expect that it will multiply the commercial sales of the nation many times, provide jobs for millions of young people when the elderly withdraw from employment, and generally usher in unprecedented prosperity. On the other hand, opponents state that the plan is an economic impossibility which will bring commerce to a stand-still and that it presages the ruination of the land.

Foreign Countries. A survey of old age legislation in force in foreign countries as of 1933, made by the Committee on Economic Security, was found to fall in the following three categories (1) *Compulsory Contributory—General Coverage:* Austria, Belgium, Chile, Czechoslovakia, France, Germany, Great Britain, Greece, Hungary, Italy, Luxemburg, Netherlands, Poland, Portugal, Rumania, Spain, Sweden, U.S.S.R., Yugoslavia, (2) *Compulsory Contributory—Limited Coverage:* Argentina, Brazil, Cuba, Ecuador, Switzerland, Uruguay, (3) *Noncontributory:* Australia, Canada, Denmark, France. In some countries two systems operate to cover different categories of persons. The coverage in Great Britain for 1931 was, on both bases, 75.5 per cent of the population over 70 years of age.

OLDER, FREMONT. An American editor, died in Stockton, Calif., Mar. 3, 1935. He was born in Appleton, Wis., Aug. 30, 1856, and at the age of 13 worked as an office boy on the *Berlin* (Wis.) *Courant*. He learned printing and in 1873 went to San Francisco where he practiced his trade, becoming a compositor in 1884. Subsequently he joined the staff of *Alta California* as a reporter, and later became associated with other San Francisco papers in various editorial capacities.

In 1895 he became managing editor of the *San Francisco Bulletin*, a position he held for 24 years. When he joined that paper it was in a run-down condition, and in a year he had increased both its circulation and its advertising revenue. The paper under his influence became a crusader for civic reforms, and he devoted considerable time and space to fighting the influence of the Southern Pacific

Railroad in politics. The *Bulletin* favored James D. Phelan as a candidate for Mayor against the Railroad's man and after Phelan's election supported his fight against the gas company. They charged the company with extravagance in placing street lights, claiming that by placing so many the city was compelled to pay unnecessary charges. The paper agitated for a new charter to reduce gas expenses, and upon its adoption, the *Bulletin* was recognized as an influence on the political life of the city.

In 1901, the teamsters' union, which had been on strike, organized politically, and nominated Eugene E. Schmitz to run against Phelan. After a bitter fight, Schmitz was elected. The *Bulletin* suspected Schmitz and his henchman, Abe Ruef, of having collected graft and proceeded to obtain proof. Through the proprietor of a French restaurant who claimed that he paid Ruef \$10,000 when French restaurants were threatened with the loss of their license, they secured the evidence needed, and engaged Francis J. Heney as prosecutor. In 1906, the two were convicted of extortion, Schmitz being released on a technicality and Ruef imprisoned.

About this time, Older turned his attention to prison reform, and through him the interest of the *Bulletin* in the subject was secured. He organized a relief bureau to help paroled or freed convicts and frequently voiced strong disapproval of capital punishment. So interested did Older become in the subject of penal reform, that he sought the release of Ruef, whom he felt had been made the scapegoat. At the time of the trial of Thomas F. Mooney and Warren K. Billings, accused of bombing a preparedness day parade in San Francisco, July 22, 1916, he claimed that the State's witnesses were perjurers, and tried unsuccessfully to have the prisoners released. Pressure was brought to bear upon Older for his championship of this case, and he resigned in 1918.

He became editor of *The Call*, published by William R. Hearst, in that year, where he continued his fight against municipal evils, and in 1929 when the *Bulletin* and the *Call* merged, he became president and editor of the newly formed *San Francisco Bulletin-Call*. Mr. Older was known as a militant and ruthless fighter in his pursuit of public justice and honest administration of municipal government. In 1926 he wrote *My Own Story*.

OLYMPICS. A bitter wrangle ensued throughout 1935 on the Olympic question—whether the United States should send a team to Nazi and anti-Jewish Germany in 1936—a wrangle finally settled in December at the annual meeting of the Amateur Athletic Union at which the embattled delegates voted, by a margin of two and a half votes, to send a team to Berlin. But before the voting there was much talk—from experts on the Jewish problem, from pulpits, in the newspapers, and by the athletes themselves.

The German Olympic authorities assured the United States Olympic Committee that there would be no prejudice shown at the winter games at Garmisch-Partenkirchen nor at the summer games at Berlin and at the final voting, this assurance coupled with reports of Americans who had traveled in Europe recently brought about the decision to send a team to the games. Avery Brundage, chairman of the American Olympic Committee, was elected president of the A.A.U., succeeding Jeremiah T. Mahoney. Brundage was committed for participation and Mahoney led the rival forces. See **Jews**.

OMAN. See under **ARABIA**.

ONTARIO, ōn-târ'i-ō. A Province of Canada. Area, 412,582 sq. miles; population (1934 estimate), 3,596,000, compared with 3,431,683 (1931 census). During 1934 there were 62,234 living births, 35,119 deaths, and 25,874 marriages. Chief cities (with 1931 populations in parentheses): Toronto, the capital (631,207), Hamilton (155,547), Ottawa (126,872), London (71,148), Windsor (63,108), Kitchener (30,793). In 1935 there were 752,744 students enrolled in the day and night schools. The Province had five universities, an agricultural college, and the Royal Military College at Kingston (maintained by the Dominion Government).

Production. The preliminary estimated value of field crops for 1935 was \$132,845,000 (\$143,734,000 in 1934), of which wheat (14,419,000 bu.) represented \$10,004,000; mixed grains (33,821,000 bu.), \$11,837,000; hay and clover (5,383,000 tons), \$36,066,000; oats (87,700,000 bu.), \$25,433,000; alfalfa (1,519,000 tons), \$11,499,000; fodder corn, \$9,102,000; potatoes, \$7,878,000; barley (16,841,000 bu.), \$6,736,000. Livestock in 1934: 2,494,500 cattle, 1,177,900 swine, 962,300 sheep, and 563,700 horses.

Mineral production for 1935 (1934 figures in parentheses) was valued at \$159,044,887 (\$145,854,173), including gold, 2,220,171 fine oz., \$78,062,330 (2,105,341 oz., \$72,808,688); silver, 6,317,341 oz., \$4,069,573 (5,523,938 oz., \$2,600,393); nickel, 138,516,240 lb., \$35,345,103 (128,687,340 lb., \$32,139,425); copper, 239,483,489 lb., \$18,668,743 (191,676,060 lb., \$14,220,447); platinum metals, 190,107 oz., \$5,407,398 (200,109 oz., \$6,187,992). Ontario produces about 85 per cent of the world's nickel output. Fur production (1933-34): 805,630 pelts valued at \$2,230,030. The fish catch (1934) amounted to 15,615 tons valued at \$2,218,550. During 1933, from the 9844 factories, with a total of 225,810 employees, the net value of products was \$540,126,918.

Finance. The end of the fiscal year was changed from October 31 to March 31. For the five months ended Mar. 31, 1935, ordinary revenue was \$21,048,944; ordinary expenditure, \$31,489,616 (including \$8,192,673 for unemployment relief). Net provincial debt (Mar. 31, 1935): \$378,414,507. For the fiscal year ending Mar. 31, 1936 (10 months actual and 2 months forecast): ordinary revenue, \$79,014,076; ordinary expenditure, \$72,147,040 (exclusive of \$20,363,645 for unemployment relief). Budget estimates for 1936-37: ordinary revenue, \$72,283,814; ordinary expenditure, \$59,085,828 (exclusive of \$12,600,000 for unemployment relief).

Government. The Province was governed by a lieutenant-governor aided by an executive council, and a legislative assembly of 90 members (65 Liberals, 17 Conservatives, 4 Liberal-Progressives, and 4 others were elected in 1934) elected by popular vote for five years. In the Dominion Parliament at Ottawa the Province was represented by 24 Senators (appointed for life) and 82 members in the House of Commons (55 Liberals, 26 Conservatives, and 1 United Farmer were elected at the Dominion general election of Oct. 14, 1935). Lieutenant-Governor, Col. H. A. Bruce; Premier, Mitchell Hepburn (Liberal). See **CANADA** under *History*.

ORANGE FREE STATE. See **SOUTH AFRICA**, **UNION OF**.

ORE. See **METALLURGY**.

OREGON. Population. On Apr. 1, 1930 (Fifteenth Census), 953,786; July 1, 1934 (latest Federal estimate), 990,000; 1920 (Census), 783,389. Portland (1930), 301,815; Salem, capital, 26,266.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu.	Value
Hay (tame) ...	1935	1,061,000	1,595,000 ^a	\$13,398,000
	1934	1,044,000	1,737,000 ^a	14,243,000
Wheat	1935	874,000	15,551,000	10,730,000
	1934	832,000	12,944,000	9,538,000
Hops	1935	26,000	24,700,000 ^b	2,955,000
	1934	23,000	19,550,000 ^b	2,932,000
Apples	1935	.....	3,900,000	2,808,000
	1934	.....	4,780,000	3,442,000
Potatoes	1935	37,000	4,810,000	3,367,000
	1934	44,000	5,720,000	3,032,000
Oats	1935	253,000	7,590,000	2,505,000
	1934	246,000	5,904,000	2,421,000
Barley	1935	127,000	3,302,000	1,519,000
	1934	98,000	2,597,000	1,506,000
Corn	1935	59,000	1,888,000	1,510,000
	1934	57,000	1,852,000	1,574,000

^a Tons. ^b Pounds.

Mineral Production. There occurred another considerable rise in the production of gold, to a total yearly value of \$1,813,000 for 1935, from \$1,178,220 for 1934. Of the 51,800 ounces of gold produced in 1935, about 16,000 came from the operations of nine dredges. The producers of gold, whether from lodes or from placer deposits, were numerous rather than large, 39 properties contributing 80 per cent of the year's production. The mining of some silver, copper, lead, and zinc, worth about \$118,000, brought the total value of the year's production of the five metals to \$1,931,358.

Education. The widespread use of warrants for meeting payments due from public-school districts that lacked sufficient current revenue continued in 1935. The situation changed, none the less, for the previously mounting total of the outstanding unpaid warrants of this sort became approximately stationary.

For the academic year 1934-35 the number of inhabitants of school age was reckoned as 256,780. Enrollments in the public schools numbered 201,422. Of these, 143,856 were in common schools or elementary grades, and 57,566 were in high schools. The year's current expenditure for public-school education in the State totaled \$13,268,711. The yearly average salary of the teachers, principals, and supervisors was \$867.15.

Legislation. The Legislature dealt with a number of recommendations made by incoming Governor Martin, for alterations in the organization of the State government. It created a State Planning Commission designed to study and advise upon matters of State concern, with a view to keeping the State beforehand with its problems and to harmonizing the divers features of its policy. The proposal to permit service of liquor by the drink was rejected.

Political and Other Events. A large number of the people of the State became believers in the merit of the Townsend plan, which had originated in the neighboring State of California, for Federal pensions at rates as high as \$200 a month for elderly people. Displeased with the failure of Governor Martin to urge the Legislature to ask Congress to enact the Townsend plan, an association of its advocates in Umatilla County threatened him in March with recall. Martin retorted by threatening the writers of the letter with prosecution under an act of 1933 against intimidating a State officer in order to influence him. Unsuccessful efforts were made later in the courts to remove Martin on the ground that he was a retired Major General of the

regular Army, and to prevent his simultaneously receiving retired pay and his official salary.

The State Capitol was partly destroyed on April 26 by fire; records of the ownership and description of forest lands, some 30,000 in number, were burned. A protracted strike of 12 weeks, carried on by the Sawmill and Timber Workers' Union in the Spring, had an adverse effect on activity in the lumber industry and on general business; it was settled by an advance of five cents an hour in the basic rate of wages, granted at the end of July, but without the establishment of the "closed shop." Oregon and Washington effected a provisional partition of the disputed waters near Chinook and Point Ellice, with regard to jurisdiction over fisheries, a source of trouble as Oregon alone permitted fish traps.

Officers. The chief officers of the State, serving in 1935, were: Governor, Charles H. Martin; Secretary of State, Earl Snell; Treasurer, Rufus C. Holman; Attorney-General, I. H. Van Winkle; Superintendent of Public Instruction, Charles A. Howard.

Judiciary. Supreme Court: Chief Justice, James U. Campbell; Associate Justices, Harry H. Belt, George Rossman, Percy R. Kelly, John L. Rand, Henry J. Bean, J. O. Bailey.

OREGON, UNIVERSITY OF. A coeducational institution under State control and support at Eugene, founded in 1876. The total enrollment for the fall term of 1935 was 2741. The attendance at the 1935 summer sessions was 1443. The instructional staff for the fall term numbered 210. The total income for the year ending June 30, 1935, was \$738,765, exclusive of gifts. The library contained 253,462 volumes. President, Clarence Valentine Boyer, Ph.D.

OREGON COAST BRIDGE. See BRIDGES.

OREGON STATE AGRICULTURAL COLLEGE. The Federal landgrant college of Oregon, established under Federal and State support at Corvallis in 1868. In the reorganization of Oregon higher education, inaugurated in 1932, the State College has been made the centre of science and professional and technical schools based upon the natural sciences. The enrollment for the autumn term of 1935, excluding duplicates, was 3141. The 1935 summer session enrollment was 517. There were 292 members on the resident teaching faculty. The library contained 134,808 catalogued volumes. Important gifts to the college during 1934-35 included 2000 additional fine and rare books from Mrs. Mary J. L. McDonald, together with walnut paneling, leaded windows, and Jacobean furnishings for the McDonald room of the library; and numerous other gifts and allotments totaling approximately \$140,000. President, George Wilcox Peavy, M.S.F.

ORIENTE DISPUTE. See ECUADOR and PERU under History.

ORT, WOMEN'S AMERICAN. A society organized in 1927 for constructive relief for the Jews of Central and Eastern Europe. It is derived from the organization Ort (the initials of three Russian words meaning Organization for the Promotion of Trades and Agriculture), founded in 1880 by prominent Russian Jews, such as Baron H. Ginzburg, S. Poliakov, and Prof. N. Bakst. Among its activities in 1935 were the support of technical and vocational schools for youths and adults of both sexes; the purchase of agricultural implements, seeds, and livestock for Ort colonies; and the supplying of tools and machinery to artisans.

The Women's American Ort in 1935 raised a spe-

cial fund whereby thousands of Polish artisans were enabled to continue plying their trade. Special courses were established to train Jewish artisans to take the new government examinations and obtain the governmental certificate required of every artisan the fee for which amounted to \$8.50.

Ort established in 1935 emergency trade courses in Paris for German Jewish refugees and an agricultural settlement in Southern France for refugees. German Jewish youths were sent for technical training to Ort schools in Lithuania, Latvia, and Poland. The society maintained a guardian bureau to finance orphans through a three-year course in vocational schools. World headquarters of the Ort are in Paris, France. Branches are maintained in England, Rumania, Latvia, Lithuania, Germany, Poland, South Africa, the United States, Canada, and Russia. The offices of the Women's American Ort are at 220 Fifth Avenue, New York City.

OSBORN, Öz'börn, HENRY FAIRFIELD. An American paleontologist, died at Garrison, N. Y., Nov. 6, 1935. Born in Fairfield, Conn., Aug. 8, 1857, he was graduated from Princeton University in 1877, where his interest in geology led to his being given charge of the paleontology section of the Princeton expedition to Colorado and Wyoming in 1877-78. The fruits of this expedition were the subject of his first papers on paleontology. Subsequently he studied anatomy and histology at the College of Physicians and Surgeons and Bellevue Medical College, New York; embryology under Francis Balfour at Trinity College, Cambridge, and comparative anatomy under Thomas Huxley at the Royal College of Surgeons, London. In 1880 he received a fellowship in biology at Princeton, and in the following year was appointed assistant professor of natural sciences there. In 1883 he was professor of comparative anatomy but resigned in 1890 to join the faculty of Columbia University, New York.

His first post at Columbia was Da Costa professor of biology, and in 1896 he was made professor of zoology, holding that position until 1910 when he retired as research professor. During the 20 years of his connection with that University he organized the Zoological Department; planned various scientific expeditions; instituted the Columbia Biological Series, and edited the first 10 volumes; served on the board of the Columbia University Press; in 1895 delivered the inaugural course of public lectures on biology, later published in *From the Greeks to Darwin* (1894); and from 1892 to 1895 served as dean of the faculty of pure science.

In the same year that he joined Columbia, he began his long and honorable association with the American Museum of Natural History in New York. His first post was as curator of the Department of Vertebrate Paleontology, which he founded, and under his direction the most extensive collection of vertebrates extant was made. These were mostly obtained by the various expeditions sent out by the Museum in the years 1893, 1897, 1903, and 1906-10, in the success of which Dr. Osborn was a potent factor. The expedition of 1906 yielded the only known specimen of tyrannosaurus, and the Fayûm Expedition into the Libyan Desert of 1907, which he personally arranged and directed, produced two of the earliest stages of the elephant. To him must go the credit of making the Museum's fossil collection an example to other organizations, for by his attractive grouping and posing of the exhibits, their teaching value was raised.

During his administration as curator, he also served as assistant to the president (1899-1901)

and as vice president and trustee (1901-08). He was elected president in 1908 and two years later retired as curator to devote himself more to the administrative side of the Museum's work. On Jan. 10, 1933, he retired as honorary president. Under his capable administration of the Museum's work, its size and scope were greatly enlarged; various departments added and expanded; the Museum journal and the memoir series of publications established, and the present administrative plan of the Museum inaugurated.

Dr. Osborn was also vertebrate paleontologist of the U.S. Geological Survey (1900-24), and senior geologist from 1924. During this period of association with the Survey, he produced the stupendous work, *The Titanotheres of Ancient Wyoming, Dakota, and Nebraska* (Monograph No. 55 of U.S. Geological Survey), begun in 1900 and delivered to the Survey in 1920. In December, 1929, the two-volume work was published. For four years (1900-04) he was a member of the Canadian Geological Survey. Another of his outstanding services to science was his work in connection with the New York Zoological Society, as chairman of the executive committee (1896-1903, 1907-09), vice president (1897), and president (1909-23). In 1906 he was unanimously elected secretary of the Smithsonian Institution, but declined because of the many demands already made upon his time.

Dr. Osborn's early studies dealt particularly with the history of mammalian teeth, from which he prepared a distinctive nomenclature, which brought order to the confusing and conflicting terminology then in existence. In 1907, he issued *Evolution of Mammalian Molar Teeth to and from the Triangular Type*. Also, he developed a theory of "determinate variations," which he called the doctrine of "rectigeneration" in the evolution of organisms. This was not to be confused with the theories of either Eimer or De Vries. Afterward, in the study of the origin of horns and other organs, he found this same principle of hereditary ancestral control of variation illustrated. It was he who gave the first emphasis to "adaptive radiation." In 1923, he described the progression of evolution before the National Academy of Sciences. His principles of adaptation were neither theories nor hypotheses but facts obtained from paleontological research. His own findings in regard to evolution led him to a new principle which he held to be fundamental to the evolution of organisms—"tetraplasy," or "the law of the four inseparable factors of evolution."

For over 50 years, Dr. Osborn was engaged in the preparation of monographs on the rhinoceroses, horses, titanotheres, Sauropoda, and the Proboscidea, during which time he issued numerous papers on these subjects. Among these may be mentioned: "The Extinct Rhinoceroses" (1898); "The Four Phyla of Oligocene Titanotheres" (1902); "New or Little Known Titanotheres from the Eocene and Oligocene" (1908); "The Horse Past and Present in the American Museum of Natural History" (1913); "Lower Eocene Titanotheres" (1913); "Equidae of the Oligocene, Miocene, and Pliocene of North America" (1918); "Camarasaurus, Amphicoelias, and Other Sauropods of Cope" (1921).

His writings, while dealing with scientific minutiae, indicate an ease of intellectual movement in fields appealing to a varied group and interest in general problems. His many biographical notices show a deep penetration into sources of human

character and personality, which derive from his long studies in heredity and the varied racial characteristics of humanity. Of his imposing list of titles, the following volumes may be mentioned: *The Age of Mammals in Europe, Asia, and North America* (1910); *Men of the Old Stone Age* (1915, 1918); *The Origin and Evolution of Life on the Theory of Action, Reaction, and Interaction* (1917); *Impressions of Great Naturalists* (1924, 1928); *The Earth Speaks to Bryan* (1925); *Evolution and Religion in Education* (1926); *Creative Education in School, College, University, and Museum* (1927); *Man Rises to Parnassus* (1927); *Cope, Master Naturalist* (1931); *Proboscidea: Discovery, Evolution, Migration and Extinction of the Mastodonts and Elephants of the World* (1st vol., 1936).

A member of scientific societies the world over, Dr. Osborn received many honors for his work in vertebrate paleontology and other fields. Colleges and universities conferred degrees upon him, and he was awarded, among others, the gold medal of the National Institute of Social Sciences (1913); the Hayden Memorial Geological Award of the Academy of National Sciences (1914); the Darwin Medal of the Royal Society (1918); the Gaudry Medal of the Geological Society of France (1918); the Cullum Geographical Medal of the American Geographic Society (1919); the Roosevelt Medal (1923); the Holland Society Medal (1935); the Wollaston Medal of the Geological Society of London (1926); and the Daniel Giraud Elliot Medal of the National Academy of Sciences (1929).

OUTER MONGOLIA. See MONGOLIA.

OWRE, ALFRED. An American dentist and educator, died in New York City, Jan. 2, 1935. Born in Norway, Dec. 16, 1870. He was brought to the United States when a small child, was educated here, and graduated from the University of Minnesota with the degree of doctor of medical dentistry in 1894, and M.D. and master in surgery from the College of Physicians and Surgeons, Hamline University in 1895. In 1929 he received the degree of D.Sc., from Columbia University.

Dr. Owre taught in the College of Dentistry, the University of Minnesota, serving as student assistant in operative dentistry, 1893-94; instructor in dental metallurgy, 1895-96; instructor in operative dentistry and dental metallurgy, 1896-97; clinic professor of operative dentistry, 1899, and dean and professor of theory and practice, 1905-27, being credited with making the School of Dentistry at the University of Minnesota one of the finest in the world. In 1927 he became dean of the School of Dental and Oral Surgery of Columbia University, and professor of the theory and practice of dentistry, but resigned in June, 1934. It was his belief that dentistry should never have been separated from the profession of medicine as one required a complete knowledge of the other. He established a four-year dental course with a grounding in medicine at Minnesota, and when he came east to Columbia reorganized the curriculum and planned a drive for \$1,500,000 to complete his plans.

He was intensely interested in the subject of decay in teeth and its elimination, and while at Minnesota wrote *Prunes or Pancakes*, a book expounding his views on the relation of proper diet to the care of the teeth. While at Columbia his researches were considered to have disproved the theory that "a clean tooth never decays." In 1930, he received a grant of \$105,000 from the Commonwealth Fund—the largest ever made for dental research—to con-

tinue his three-year researches in the cause of decay in teeth. Although he never completed them, he felt that he had done sufficient to prove that decay could be overcome by proper diet. His later researches were directed toward the study of dental pulp, a subject about which comparatively little is known by scientists.

In 1931, in his annual report to Dr. Nicholas Murray Butler, president of Columbia University, Dr. Owre assailed practicing dentists for their opposition to his plans for a system of low-priced dental clinics, through the fear of loss of patients rather than because the system was unsound. A year previous to his retirement he had gone abroad to study dentistry in the Union of Soviet Socialist Republics, Austria, and Germany. He was a frequent contributor to magazines and newspapers on subjects relating to dentistry.

PACIFIC RELATIONS, INSTITUTE OF. An organization formed in Honolulu in 1925 to serve as an unofficial body in studying the conditions of the Pacific peoples. It is governed by a Pacific council, consisting of one representative from a recognized affiliated body of similar purposes in each country, including Australia, Canada, China, Great Britain, Japan, the Philippines, New Zealand, the United States, and the U.S.S.R. The national councils conduct its educational and research activities.

During 1934 and 1935 the American Council centered its research programme in the field of "Standards of Living," which will be one of the special topics for discussion at the next Institute conference in 1936. The research department expanded its memoranda service into *The Far Eastern Survey*, a fortnightly publication carrying in each issue one long study and several shorter items on matters of current interest. The leading articles have covered such subjects as the following: The Crisis in the Chinese Cotton Industry; The Current Boom in the Japanese Steel Industry; Industrialization of the Soviet Far East; Japan as a Consumer of American Cotton; Japan's Penetration of Latin America; Philippine Copra and Coconut Oil in the American Market; Export Control in Japan.

Other publications of the Institute and the American Council which appeared during 1935 were: *Commodity Control in the Pacific Area*, edited by W. L. Holland; *Trade and Trade Barriers in the Pacific*, by Philip G. Wright; and *The Future of Sea Power in the Pacific*, by Walter Millis. *Pacific Affairs*, the Institute's quarterly magazine, during 1935 published articles dealing with various aspects of the naval question, Communism in China, studies of Manchurian and Mongolian problems, and a variety of other questions in their Pacific setting.

A second intensive course in the Russian language was given under the auspices of the American Council, in connection with the Columbia Summer School of 1935.

Among the officers of the American Council are: The Honorable Newton D. Baker, chairman; Frederick V. Field, secretary; Dr. Carl L. Alsberg, chairman of the research committee; Charles J. Rhoads, treasurer. Headquarters are at 129 East Fifty-second Street, New York, N. Y.

PAHANG. See FEDERATED MALAY STATES.

PAINTING. Under Government patronage and impetus of relief projects there was exceptional activity in the field of painting in 1935. The PWA Project which set over 3000 painters to work in 1934 came to an end before that year was half run, but the painters who had thus been encouraged to produce did not lay aside their brushes. Exhibi-

tions of their works were shown throughout the country and many who had never thought of exhibiting before proudly offered crude and feeble efforts for the inspection of the public. Standards were very much lowered, judgment of the immature was most lenient, and much inferior painting was shown under really distinguished auspices. But aside from all this the art of painting was conspicuously affected in 1935 by influences from outside, which as individual tributaries swept into the main stream. These were African Negro sculpture; paintings by Cezanne, Gauguin, Van Gogh, brought over from France; examples of our own "Primitive Art," the untutored production of simple-minded people of early days in America; and "Currier and Ives" prints with their Victorian drollery and emphasis on the "American scene." Consciously, or unconsciously, there was a tendency to dehumanize art by taking it out of the realm of purely visual expression and give it psychological affirmation; and, paradoxically, at the same time to return to the frankly illustrative. In Paris and in New York exhibitions of *genre* paintings were held with the announced purpose of inducing a return to subject pictures. The Government's insistence upon representation of the "American scene" in all work done under its auspices and in programmes of competitions for murals contributed to the same end.

The three American painters outstanding and most discussed in 1935 were Grant Wood of Iowa, realist who in a measure harks back to Holbein; John Steuart Curry, born in Kansas, painter of theatrically dramatic scenes of western life, and Thomas H. Benton, a Missourian, whose paintings of farm life won many prizes in exhibitions voted by professional juries to the mystification of the public which still regards art and beauty as synonymous. Next to this trio in prominence came Charles Burchfield and Edward Hopper, both realists and strong painters given to the representation of that which is typically homely.

The first official act of the Painting and Sculpture Section of the Procurement Division of the Treasury Department, set up in October, 1934, was to appoint 10 painters and 2 sculptors to execute mural paintings and sculpture for the new Post Office and the new Justice buildings in Washington, after which competitions were announced for additional paintings and sculpture for the same purpose. The original appointees were—painters, Thomas H. Benton, George Biddle, John Steuart Curry, Rockwell Kent, Leon Kroll, Reginald Marsh, Henry Varnum Poor, Boardman Robinson, Eugene Savage, and Maurice Sterne. Two years were allowed them to complete their works. Early in October, 1935, the competitions bore fruit. For murals in the Post Office, 315 designs were submitted by 142 painters, and for murals in the Justice building, 90 designs were submitted by 55 painters, the results of approximately four months' work. The jury, consisting of Edward Bruce, Olin Dows, Leon Kroll, Bancel LaFarge, Jonas Lie, Ernest Peixotto, Henry Schnackenberg, and Eugene Speicher, rejected all those for the Justice building, thereby calling down a sharp letter of criticism and complaint from The Mural Painters' Society, in which this particular competition was characterized as "a colossal and expensive failure," and accepted the designs submitted for the Post Office by the following artists: Alfred D. Crimi, William C. Palmer, Frank Mechau, George Harding, Ward Lockwood, Karl Free, Doris Lee, and Tom Lea, the last two being asked to "redesign." After this competition closed other appointments followed—21 paint-

ers among the unsuccessful competitors being appointed to do murals for other public buildings on the recommendation of the jury, and 22 being appointed on the initiative of the Painting and Sculpture Section. The last of October all of the winning designs in this competition as well as many of those rejected, a few of the designs by original appointees, and winners in local competitions, were placed on public exhibition for a period of three weeks in the Corcoran Gallery of Art at Washington.

Meanwhile two new agencies—relief measures—for the aid of artists were set up by the Government in 1935. The first of these, under Messrs. Bruce, Dows, and Watson, of the Painting and Sculpture Section, out of an appropriation of \$530,784 gave employment to 450 artists decorating Federal buildings not invariably new. The second, broader in scope but slower to get into action, was under the Works Progress Administration and a part of its \$300,000,000 "white collar" programme. To the art section under Folger Cahill, \$6,000,000 was allocated for the employment not only, however, of painters but of educationalists in this field. Both of these agencies were set up for only one year. What their effect will be upon the art of painting in the United States can only be surmised. It is of interest to note in this connection that all these activities on the part of the Federal Government have chiefly benefited the submerged and thus have greatly increased the volume of production for which only a temporary and unstable market has been created. However for mural painting and painters, 1935 will always be remembered as epoch marking—a time of unheard-of demand and patronage.

Among numerous mural projects, mention should undoubtedly be made of a painting in egg tempera 70 ft. long by 35 ft. in height executed by Thomas Loftin Johnson, a Yale graduate, on the wall of the new Mess Hall of the U.S. Military Academy at West Point which represents a Military pageant, fighting men of all the world. Also of a mural in the same medium 125 ft. long by 10 ft. high in the McKinley High School, at Washington, representing intellectual and physical progress, also by a Yale School man, Philip Fletcher Bell—his first commission.

For Roosevelt Memorial Hall in the American Museum of Natural History, New York, William Andrew Mackay executed a series of large mural paintings depicting Theodore Roosevelt's travels and explorations.

The Mural Painters' Society held a notable exhibition of mural paintings and studies in the Grand Central Galleries, New York, in February, 1935.

One of the paintings shown in The Mural Painters' Exhibition in the Grand Central Galleries was by Ben Shahn, depicting prison conditions, which was so unpleasant and depressing that objections made to it by the prisoners in Riker's Island Penitentiary, for which it was intended, were upheld by the New York City Art Commission and the work discarded. Much discussion was aroused thereby.

The attitude of the public toward painting was manifested in every case where, in the larger exhibitions, popular prizes were awarded by ballot of those in attendance. At the Carnegie International Exhibition in Pittsburgh the popular prize was for the second time voted to a marine painting by Frederick J. Waugh; at the Corcoran Gallery of Art's Biennial Exhibition of Contemporary American Painting it went to a nude, very realistically rendered, by William M. Paxton; and in the special exhibition of "Three Centuries of American Painting" held in the new Museum in Hartford, a paint-

ing by Thomas Eakins entitled "The Pathetic Story" was the popular choice.

As standards for current production have become more hazy and unstable, interest in and appreciation of the works of early American painters seemed to increase. During the summer of 1935 notable exhibitions of portraits by early American painters from Copley to Ashur B. Durand were shown in the Museum of Fine Arts, Boston, and in the Fogg Museum, Cambridge.

Of supreme importance as painting of distinguished merit was the exhibition of portraits by Cecilia Beaux, opened in the American Academy of Arts and Letters, in New York, in November.

A vast amount of new painting was shown in summer exhibitions in New England and elsewhere. Among the most notable of these were those held in Gloucester, Rockport, Provincetown, Ogunquit, Mystic and Old Lyme, Manchester and Stockbridge, Woodstock, and New Hope. A new gallery was opened in Fitz William, New Hampshire.

The summer schools of painting were filled to overflowing and the autumn enrollment at art schools all over the country in 1935 was much larger than ever before. This may be the result of unemployment, but even so it would seem to indicate greatly increased interest in the art of painting.

The American Academy in Rome awarded its Fellowship in Painting to Robert B. Green of Pittsburgh, graduate of the Carnegie Institute of Technology and post graduate of the Yale Art School for a panel in egg tempera picturing "The County Fair."

The Guggenheim Foundation gave Fellowships in 1935 to the following painters: Henry E. Mattson, Yasuo Kuniyoshi, Frank Mechau, and Frederico Le Brun.

The ranks of the painters were seriously depleted in 1935 by the death of the following: Herbert Vos (q.v.), Douglas Volk (q.v.), Edward Percy Moran, Frederick Dielman (q.v.), Childe Hassam (q.v.), Lucile Douglass, Edward C. Volkert, Ambrose E. Webster, Edwin C. Taylor, Jessie Willcox Smith, W. Merritt Post, William Forsyth, Walter Griffen, Walter L. Clark, William de Leftwich Dodge, Oliver Herford, Susan Barse Miller, Mrs. J. Montgomery Sears, Charles Demuth, Peter Marcus, Helen C. Hovenden.

PALAU. See JAPANESE PACIFIC ISLANDS.

PALESTINE. A territory on the east coast of the Mediterranean, administered by Great Britain under a mandate of the League of Nations since Sept. 29, 1923. Capital, Jerusalem.

Area and Population. With an area of about 10,000 square miles, Palestine had an estimated population on Mar. 31, 1935, of 1,245,000. The 1931 census showed 1,035,821 inhabitants, including 759,712 Moslems, 174,610 Jews, 91,398 Christians, and 10,101 of other confessions. On June 30, 1934, the Jewish population was estimated at 307,312. During 1935 61,541 Jews entered the country as immigrants, as against 42,359 in 1934. Estimated populations of the chief cities in 1935 were: Jerusalem, 105,000; Tel-Aviv, 105,000; Haifa, 70,000; Jaffa, 65,000; Nablus, Hebron, and Gaza, about 17,000 each.

Education. In 1933-34 there were 320 Arab public schools, with 30,842 pupils; 174 private Moslem schools, with 10,900 pupils; 467 Jewish schools, with 43,900 pupils; and 148 private Christian schools, with 17,347 pupils. The Hebrew University on Mount Scopus, Jerusalem, had 305 students and 71 teachers in 1934.

Production. A predominantly agricultural

country, Palestine in 1935 produced 103,000 metric tons of wheat, 46,000 tons of durra, 68,000 tons of barley, 69,000 tons of melons, 14,535 tons of tomatoes, and 6500 tons of potatoes. The wine yield in 1933 was 30,000 hectoliters, sesamum 200 tons, olives (1931) 33,900 tons. The production of citrus fruit was rapidly expanding; in 1935 the export crop totaled about 8,000,000 cases, chiefly oranges and grapefruit. Livestock in July, 1934, included 131,000 cattle, 188,000 sheep, 380,000 goats, 15,600 horses, 7000 mules, 4500 buffaloes, 75,000 donkeys, and 32,000 camels. Gypsum, rock salt, cooking salt, carnallite, and bromide are the chief minerals found. The chief industries are the making of wine, soap, food products, cement, and textiles. In 1934 there were 5300 industrial establishments, with about 35,000 workers.

Foreign Trade. Imports for consumption in 1934 were valued at £P15,152,781 (£P11,124,489 in 1933) and exports of Palestine products at £P3,217,562 (£P2,591,617 in 1933). Imports from the United Kingdom in 1934 were £P2,960,706; exports to the United Kingdom, £P1,785,014. United States statistics for 1935 showed imports from Palestine of \$98,269 (\$175,557 in 1934) and exports to Palestine of \$4,941,820 (\$4,394,875 in 1934). Rice, wheat, flour, sugar, wood, cotton piece goods, etc., were the leading imports, while oranges, laundry soap, grapefruit, and wines were the principal exports.

Finance. For the fiscal year ended Mar. 31, 1935, government revenues totaled £P5,452,663 (£P3,985,493 in 1933-34) and expenditures were £P3,230,010 (£P2,704,856 in 1933-34). The surplus of £P2,222,653 in 1934-35 increased the government's reserve fund to £P4,733,555 as of Mar. 31, 1935. The public debt on Mar. 31, 1935, totaled £P4,500,000. The Palestine pound was equivalent in value to the pound sterling.

Communications. Palestine's railway mileage in 1935 was 620 miles, excluding 70 miles on the Ma'an-Mudawara section. In the same year 2,100,095 passengers and 1,022,288 tons of freight were carried. Gross revenues totaled £P785,556 and working expenditures £P481,919. Highways extended 1710 miles. Haifa and Jaffa are the chief ports. In 1934 1684 steamers of 4,264,571 tons entered Palestinian ports. Air lines linked the chief cities with Europe, Egypt, and India.

Government. The Constitution of Sept. 1, 1922, vested executive authority in a High Commissioner and Commander-in-Chief and an executive council. It provided also for a legislative council including representatives of the various religious communities, but due to lack of cooperation among the religious groups this council was not established until Dec. 22, 1935. In the meantime its functions were performed by an advisory council appointed by the High Commissioner. The Jewish, Moslem, and Christian communities enjoyed complete autonomy in their religious, cultural, and communal affairs. English, Arabic, and Hebrew were official languages. High Commissioner and Commander-in-Chief in 1935, Lieut.-Gen. Sir Arthur Grenfell Wachope (appointed Nov. 1, 1931). His term was extended on Dec. 31, 1935, to Nov. 20, 1941.

History. Although Jewish immigration into Palestine continued during 1935 at a greater rate than ever before (see above), there was no repetition of the Arab riots which broke out in 1934 in protest against the Jewish influx (see 1934 YEAR BOOK, p. 541). In five years the Jewish population had doubled and at the end of 1935

it was almost one-half the Arab population. With the balance of population and voting power rapidly shifting in their favor, the more responsible Jewish leaders were anxious to postpone efforts to win League approval of a change in the original mandate under which the Jewish "national home" stipulated in that document would become the Jewish "national state." However the semi-Fascist and militant Revisionist faction of the Zionist movement insisted upon bringing the issue before the Mandates Commission of the League of Nations immediately. The result was a serious setback to the goal of a Jewish state in which the Arabs would be relegated to a subordinate position. The Mandates Commission on Jan. 10, 1935, ruled that the establishment of such a state in Palestine was incompatible with the scope of the British mandate for Palestine. A Revisionist resolution affirming that a Jewish state was the ultimate aim of the Zionist movement was rejected by the World Zionist Congress held at Lucerne, Switzerland, Aug. 20-Sept. 4, 1935. While Zionist sentiment overwhelmingly favored the movement for a Jewish state in Palestine, they felt that open espousal of such an aim would hinder rather than help their cause.

The hope of postponing clarification, and perhaps the crystallization, of Arab-Jewish governmental relationships until the Jewish position was stronger also led Jewish leaders in Palestine to oppose the establishment of the Legislative Council, proclaimed by the British High Commissioner on Dec. 22, 1935 (see under *Government*). The Council was to consist of 28 members, including 14 Arabs (9 elected and 5 nominated), 8 Jews (3 elected and 5 nominated), 5 nominated British officials, and one nominated civilian, representing commercial interests. The chairman would be British. While the Arabs criticized the proposed Council for its lack of power (matters affecting international relations, the mandate, finance, and immigration were reserved to the High Commissioner), they nevertheless indicated that they would modify their former position and participate. The Jews, however, expressed a determination not to cooperate (see *Jews under Palestine*).

The 15-year rule of the intransigent Arab leader, Ragheb Nashashibi, as Mayor of Jerusalem, was ended by his defeat in the municipal elections early in 1935. Dr. Hussein Khalidi, his successor, was an Arab of moderate tendencies favorable to reconciliation of Arabs and Jews. Nashashibi's appeal for annulment of the election was rejected by the High Commissioner. Shortly afterward the former Mayor formed an Arab nationalist party called the Party of National Defence, which was aroused by the success of the Nationalist agitation in Egypt (q.v.) to seek to extract concessions from the British mandatory power, by force if necessary. Another development affecting Jerusalem was the completion late in 1935 of a 38-mile pipeline supplementing a water supply which had been inadequate for the city's needs for more than 2000 years. The new supply raised the amount of water available to 3,000,000 gallons daily instead of the 700,000 gallons available before.

The development of the Anglo-Italian crisis over Ethiopia in September and October, 1935, caused a minor financial panic in Palestine which served to check somewhat the steady development of the economic boom. Business confidence was soon restored, however, and Palestine participated in the economic and financial sanctions imposed against Italy by the League of Nations. Mean-

while the concentration of the British fleet in the Eastern Mediterranean had increased the strategic importance of Haifa, with its newly opened oil pipeline from the Iraqi oil fields. Further development of the port for both commercial and naval purposes was under way at the end of 1935. See ETHIOPIA, GREAT BRITAIN, and ITALY under *History*.

PALESTINE. See ARCHÆOLOGY.

PALMA, ANGELICA. A South American novelist, died Sept. 6, 1935. See SPANISH-AMERICAN LITERATURE under *Peru*.

PANAMA. A republic of Central America, bisected by the Panama Canal Zone (q.v.). Capital, Panamá.

Area and Population. Excluding the Canal Zone, Panama has an area of 28,575 square miles and a population estimated (1934) at 490,991 (467,459 at the 1930 census). The 1930 census showed 78,813 whites, 69,583 Negroes, 42,897 Indians, 4138 Orientals, and 249,583 mestizos. The 1930 population of Panamá City was 74,409; Colón, 29,769.

Education. Primary education is compulsory but about half the population remains illiterate. In 1933-34 there were 51,992 pupils in 500 elementary schools; 3129 students in secondary and vocational schools; and 1718 students in the Instituto Nacional at Panamá. There were also 71 private institutions and various professional and art schools. In accordance with the decree of May 29, 1935, the National University of Panama was inaugurated on Oct. 7, 1935, with the former Instituto Nacional serving as the nucleus for the larger institution.

Production. Agriculture is the principal occupation, the secondary industries being cattle raising, lumbering, and pearl fishing. Shipments of bananas, the chief crop, totaled 4,781,000 stems in 1934; coconuts, 6,097,000 nuts; cacao, 11,640,000 lb.; mother-of-pearl shells, 115,000 lb.; coffee (1933), 138,305 lb. Sugar production was 34,000 metric tons in 1933-34. Rubber, tobacco, potatoes, balata, sarsaparilla, and rice are other products. Cattle herds total about 350,000 and about 40,000 head are slaughtered annually. The forests yield valuable hardwoods. Some gold is mined. Articles manufactured for local consumption include beer, liquors, shoes, tropical clothing, tobacco products, and furniture.

Foreign Trade. General imports in 1934 were valued at 13,448,000 balboas (1 balboa equals 1 dollar), against 9,296,000 balboas in 1933, while exports of Panama products amounted to 3,407,000 balboas (2,559,000 in 1933). The chief exports, in 1000 balboas, for 1934 were: Bananas, 2044; cacao, 679; coconuts, 135. Textiles, petroleum products, perfumery, wheat flour, and meats were leading imports. The United States in 1934 supplied 53.4 per cent of the imports (57.2 in 1933); Japan, 12.6 (7.4); United Kingdom, 7.1 (8.2). The United States purchased 91.8 per cent of the exports in 1934 (89.5 in 1933).

Imports in 1935 totaled 15,945,779 balboas; exports, 3,992,654 balboas (preliminary). United States statistics for 1935 showed imports from Panama of \$5,113,741 (\$4,186,732 in 1934) and exports to Panama of \$20,816,698 (\$18,335,512).

Finance. Government revenues and expenditures in the period from Jan. 1, 1933, to Dec. 31, 1934, were 15,653,677 balboas and 14,802,317 balboas, respectively. Budget estimates covering the two years ending Dec. 31, 1936, balanced at 12,614,000 balboas. In addition there were special budgets covering the charity and anti-tuberculosis fund and road fund operations, with estimates balancing at

1,880,000 and 825,000 balboas, respectively. The direct public debt on June 30, 1934, totaled 19,062,896 balboas (external, 15,913,646; internal, 3,156,250) and the indirect debt was 1,915,207 balboas.

Communications. The Panama Railroad connecting Panamá on the Pacific with Colón on the Atlantic is the chief railway line (47.61 miles). Including the Panama Canal Zone lines and several narrow-gauge lines in Chiriqui Province, there were 230 miles of railway lines in 1934. Highways extended about 680 miles in 1934. In furtherance of the Pan American Highway project, the U.S. Government in 1935 agreed to construct a 600-ft. bridge over the Chiriqui River in Panama. Air lines connect the larger cities and towns with the inter-American air network. The merchant marine in 1934 comprised 72 vessels of 271,509 gross tons.

Government. The Constitution of Feb. 13, 1904, as amended in 1918 and 1928, vested executive power in a President elected by direct vote for four years and ineligible for reelection. Legislative power rests in a national assembly of 32 members, elected for four years. President in 1935, Dr. Harmodio Arias (assumed office, Oct. 1, 1932).

History. The negotiations for a revision of the United States-Panama Treaty of 1903, by which the United States obtained a perpetual lease of the Panama Canal Zone and established a protectorate over Panama, continued with several interruptions throughout 1935. Inaugurated in Washington in 1934 by a special envoy of the Panamanian Government, the negotiations received a new impetus from conversations held between Presidents Arias and Roosevelt during the latter's visit to Panama on Oct. 16, 1935. In a New Year's message published in the *New York Times* of Jan. 1, 1936, Secretary of State Hull said the negotiations with Panama were "now at a stage where there is an excellent prospect of an agreement satisfactory to both countries being signed in the near future."

The principal issues on which agreement proved most difficult were the form of payment of the Canal Zone annuities to the Panamanian Government by the United States; jurisdiction over the suburb of New Cristobal in Colón, which was constructed by the government of the Canal Zone for its employees; the control of radio broadcasting facilities in the Canal Zone; sales of government stores in the Canal Zone in competition with Panamanian merchants; and the development and control of the Pan American Highway in the Canal Zone region.

The annuities controversy arose in 1934 when the Washington Government paid the \$250,000 annual rental for the Canal Zone in checks redeemable in paper dollars, in place of the gold coin called for in the 1903 treaty. Panama refused to accept the checks and in March, 1935, threatened to discontinue service of the \$4,500,000 loan of 1923 unless the annuities were paid in gold or the equivalent in depreciated currency. (The Government of Panama and its subdivisions were already in default as to interest payments on \$14,453,000 out of the \$18,727,500 in dollar bonds outstanding as of Dec. 31, 1934.) It was announced on November 20 that a settlement of the annuities question had been reached, conditional upon a mutual agreement on the other issues under discussion.

Another dispute which arose during the year involved the request of the Panamanian Government for permission to construct a transisthmian highway connecting the city of Colón with the city of Panamá on the Pacific side of the Isthmus. To

construct such a highway, Panama had first to secure a waiver by the Panama Railroad (owned by the Canal Zone Government) of its exclusive monopoly of all forms of communication between the two oceans.

The growing nationalistic feeling in Panama was reflected in legislation placed in effect during 1935. One law, designed to restore control of the retail trade to Panamanian citizens, limited foreign retail shops to one for each 100 persons of the same nationality residing in the republic. The cities of Panamá, Colón, and Bocas del Toro were exempted from the law's application. When the law became effective July 1, 1935, some 350 Chinese and East Indian shopkeepers in towns in the interior were classified as surplus and taxed an additional \$30 per month. After Jan. 1, 1936, the tax was to be increased gradually until it reached \$75 a month. In September the Civil Court of Appeals declared the legislation unconstitutional. Its final determination was pending before the Supreme Court at the close of the year.

Another law, intended to provide additional employment for Panamanian nationals, required that three-fourths of the employees of all business concerns operating in Panama should be citizens of the republic. This law aroused especially vigorous opposition among the numerous East Indian shopkeepers who monopolized much of the tourist trade. The so-called "free trade law," which became effective Mar. 1, 1935, was considered the most important economic measure adopted since Panama became independent. Import duties on practically all commodities except a few advantageously produced in Panama were removed, effective June 1, 1935, for the purpose of fostering Panama's tourist and reexport trade and making it a distributing centre for the commerce passing through the Panama Canal. The law also made provision for the development of a deep-water port at Chame Bay, with eventual establishment of a free port in view. The government also purchased about 250,000 acres of farm land for redistribution among landless families and promoted the cultivation of rice, sugar cane, and other tropical crops.

The campaign for the presidential election of 1936 got under way in earnest in September, 1935, following the discovery of a plot to overthrow the Arias administration. On August 30 elements opposing the government obtained a number of machine guns, automatic rifles, small arms, and ammunition from a United States army post in the Canal Zone for the purpose of starting a revolution. In connection with the plot, the police arrested Francisco Arias Paredes, leader of the Liberal Reform party and a presidential candidate at the 1932 elections; a member of the National Assembly; and a former chief of the Panama police. The nomination of Domingo Diaz Arosemena for the presidency by the dominant Doctrinary Liberals caused the secession from the party of a faction known as the Liberal Democratic party, who on September 22 nominated Enrique A. Jimenez, former Secretary of Finance, as their candidate. On November 10 Dr. Belisario Porras, four times President of the republic, was nominated by the Liberal Union party and on December 22 the Revolutionary Coalition party, affiliated with the Arias administration, nominated Dr. J. D. Arosemena, Minister of Foreign Relations, despite the action of the national election jury in declaring him ineligible. See PANAMA CANAL ZONE.

PANAMA CANAL. According to the annual report of the Governor of the Panama Canal for the

fiscal year ending June 30, 1935, transits of ocean-going commercial vessels in 1935 numbered 5180 as compared with 5234 transits in the previous year, a decline of 54, or 1.1 per cent. For the year, transits through the Canal averaged 14.19 per day as compared with 14.34 in 1934, 11.40 in 1933, 11.92 in 1932, 14.71 in 1931, 16.51 in 1930, and 17.23 in 1929, when traffic through the Canal attained its peak. In comparison with the previous year, there also was a decline of 2.6 per cent in Panama Canal net tonnage and 3.1 per cent in tolls. On the other hand, the volume of cargo carried through the Canal was higher, showing an increase of 2.5 per cent as compared with the preceding year.

The method of classifying ships passing through the Canal was changed during the year, and all previous traffic summaries have been revised to show statistics on the basis of the revised classification. Traffic is now segregated into three classes, namely, (1) ocean-going commercial traffic, which includes all tolls-paying vessels of 300 or more net tons, Panama Canal measurement, or 500 or more tons, displacement measurement; (2) local commercial traffic, which includes all tolls-paying vessels of less than 300 net tons, Panama Canal measurement, and also all tolls-paying naval vessels under 500 tons displacement measurement; and (3) vessels transiting the Canal free of tolls. The last named classification includes all naval and other vessels owned and operated in the Government service of the United States and Panama, war vessels of Colombia, and vessels transiting the Canal solely for repairs at the Balboa shops.

Previously, the tolls-paying vessels were classified by commercial ships of 20 net tons or over, and launches under 20 net tons. The new classification was devised with a view to giving better comparative statistics covering the transit of normal-sized commercial vessels, primarily with a view to preventing these statistics from being distorted by frequent transits of small toll-paying vessels engaged in local trade between the two coasts of Central America.

The history of Canal traffic has reflected five distinct trends in the world's economic and commercial developments. After the opening of the Canal on Aug. 15, 1914, there was a slow growth through eight years, in which the maximum of transits was 2791 in 1921. The rise in Californian oil production was primarily responsible for raising the transits to 3908 in 1923 and 5158 in 1924. Traffic continued at about this level until the business expansion brought a considerably increased volume toward the end of the last decade when Canal traffic reached peaks of 6289 in transits, \$27,111,125 in tolls, 30,647,768 in cargo tonnage, and 29,963,670 in net tonnage, Panama Canal measurement. From these peaks the world-wide depression resulted in a sharp curtailment of traffic, the low point being reached in 1933 when transits dropped to 4162, tolls to \$19,601,077, cargo tonnage to 18,161,165, and net tonnage, Panama Canal measurement, to 22,803,798. Beginning in August, 1932, a gradual increase in Canal traffic began, coincident with the general improvement in economic conditions, and total traffic for the fiscal year 1933 nearly equaled that of the previous year.

During the fiscal year 1934 the improvement continued uninterruptedly until March when four successive declines occurred at the close of the fiscal year. In June, 1934, the decline was particularly marked, due principally to strikes on the west coast of the United States which tied up shipping. Beginning in July, 1934, and continuing until November, each month's traffic through the Canal

again showed an increase over the preceding month. Thereafter, traffic declined steadily until the end of the fiscal year. A marked decrease in shipments of mineral oils from California was partly responsible for this decline. In June, 1935, traffic through the Canal reached its lowest point since August, 1934; the decrease being attributed in part to seasonal factors and in part to labor troubles on the west coast of the United States.

In the fiscal year 1935 the transits of naval and other public vessels of the United States Government, public vessels of the Colombian Government, and vessels transiting solely for repairs, none of which pay tolls, numbered 552, as compared with 503 for 1934. The total of tolls-paying and free transits combined, which includes all ocean-going vessels of 300 tons or more, numbered 5732, in comparison with 5737 in 1934, making daily averages of 15.70 and 15.72, respectively.

Net tonnage of the ocean-going commercial vessels passing through the Canal in 1935 aggregated 27,805,588 tons, Panama Canal measurement, a decrease of 2.6 per cent in comparison with 1934. Tolls in 1935 amounted to \$23,307,062, decreasing 3.1 per cent in comparison with the \$24,047,183 collected in the preceding year.

Cargo carried through the Canal in 1935 amounted to 25,309,527 tons and was 2.5 per cent higher than cargo in 1934. This increase was due wholly to gains in the tonnage moving from the Atlantic to the Pacific, cargo tonnage in that direction registering an increase of 22.2 per cent in comparison with the preceding year. From the Pacific to the Atlantic there occurred a loss in cargo tonnage, the movement in this direction decreasing 4.1 per cent.

Segregating the traffic through the Canal by nationality of vessels, the accompanying table shows the aggregate cargo carried by ships of the leading maritime nations during each of the past three fiscal years. For the year 1935, the number of transits of each nationality is also shown.

Nationality	1933 * Tons	1934 * Tons	1935 * Tons Transits	
United States	7,987,739	11,578,453	10,825,573	2,143
British	4,170,995	5,193,136	5,776,021	1,170
Norwegian	1,773,161	2,080,833	2,463,675	515
Japanese	1,159,733	1,510,916	1,446,049	255
German	813,231	962,218	1,300,991	341
Swedish	403,169	766,921	782,548	111
French	249,395	430,471	570,034	116
Danish	448,863	533,262	555,981	125
Danzig	347,934	575,125	440,186	49
Netherlands	381,071	403,451	439,168	114
Italian	189,371	256,465	336,196	77
All remaining	236,503	412,758	373,105	164
Total	18,161,165	24,704,009	25,309,527	5,180

* Fiscal year ended June 30.

PANAMA CANAL ZONE. A strip of land extending for five miles on each side of the Panama Canal, the use of which was granted to the United States in perpetuity by the Panama-United States treaty of 1903. Area, 552.8 square miles (land area, 361.86 sq. miles). The civil population in June, 1935, totaled 29,636 (29,964 in June, 1934). Of the 1935 total, 7553 were employed by the Panama Canal and the Panama Railroad, including 2587 Americans and 4966 aliens. About 500 Americans and 4200 alien employees were living outside of the Canal Zone. The birth rate, including still-born, of the Canal Zone population in 1934 was 11.48 per 1000 population; death rate, 6.43, or the lowest on record. The Canal Zone in 1934-35 maintained 6 elementary and 5 secondary schools for white children, with an average attendance of 2797;

and 8 elementary and 1 normal school for colored children, with an average attendance of 3406.

The net revenues from Canal operations proper were \$14,519,506 for the fiscal year ended June 30, 1935 (\$16,810,348 in 1933-34). Net revenues from business operations under the Panama Canal were \$1,021,217 (\$1,366,755 in 1933-34). The combined net revenues accruing from the Canal and its business units totaled \$15,540,723 (\$18,177,103 in 1933-34). The capital investment at the beginning of the fiscal year was \$543,744,707 and the net revenue represented a return of 2.86 per cent on the investment (3.37 per cent in 1933-34). The foregoing figures exclude operations of the Panama Railroad Co. which showed a net profit of \$899,196 (\$1,156,738 in 1933-34). For Canal transits and tolls in 1934-35, see PANAMA CANAL.

The status of the Canal Zone is that of a military reservation under a Governor appointed by the President of the United States. The Canal Administration controls sanitation and quarantine in the cities and harbors of Panamá and Colón, although they remain within the political jurisdiction of Panama. The U. S. Army maintains airports at France Field, at the Atlantic entrance to the Canal, and at Albrook Field on the Pacific side. Governor in 1935, Col. Julian L. Schley, U. S. Army.

History. On Aug. 30, 1935, a number of machine guns, automatic rifles, small arms, and ammunition were stolen from the U. S. Army ordnance depot at Corozal for use in overthrowing the administration of President Arias in the Republic of Panama (see PANAMA under History). Canal Zone authorities arrested Ellis M. Stevens and Edward Payne, both former American soldiers, in connection with the theft after the Panamanian police had uncovered the plot. On October 30 Stevens was sentenced to seven and one-half years in prison and Payne to three and one-half years.

Nelson Rounsevell, publisher of *The Panama American*, was fined \$500 or 90 days in jail by Judge Richard Thomas at Balboa on October 4 after a Canal Zone jury had convicted him of criminally libeling Maj. Gen. Harold B. Fiske in an editorial attacking alleged unbearable conditions for enlisted men at Fort Clayton in the Canal Zone. The defense offered testimony indicating that the smoking of marijuana on post by soldiers was common.

PAN AMERICAN UNION, THE. An official international organization, founded in 1890 as the International Bureau of American Republics and maintained by the 21 republics of the western hemisphere for the development among them of good understanding, friendly intercourse, commerce, and peace. It is controlled by a Governing Board, composed of the Secretary of State of the United States and the diplomatic representatives at Washington of the other republics, and is administered by a Director General and an Assistant Director chosen by the Board.

The Pan American Union publishes a monthly *Bulletin* which is issued in three editions, English, Spanish, and Portuguese, as well as numerous special reports on the countries members of the Union. These are widely distributed in all the republics of the American continent and are intended to make available information on the various aspects of inter-American activity.

The Union also acts as the permanent organ of the International Conferences of American States which meet at intervals of five years. The programme and regulations of each conference are

prepared by the Governing Board of the Union, and in the interval between the conferences the Union is engaged in giving effect to the resolutions adopted and also coöperates in securing the ratification of the treaties and conventions signed at each conference.

During the year 1935 the Pan American Union was actively engaged in giving effect to the conclusions adopted at the Seventh International Conference of American States, which met at Montevideo, Uruguay, from Dec. 3 to 26, 1933. At that conference, 95 resolutions were approved, and 6 conventions and 1 protocol were signed by the delegates of the American Republics.

The conventions signed at the Montevideo Conference were as follows:

1. Convention on the Rights and Duties of States
2. Convention on Nationality
3. Convention on the Nationality of Women
4. Convention on Asylum
5. Convention on Extradition
6. Convention on the Teaching of History
7. Additional protocol to the Inter-American Conciliation Convention

In addition to the foregoing conventions, there was also signed at Montevideo at the time of the Conference, a treaty on Equal Civil and Political Rights by representatives of Cuba, Ecuador, Paraguay, and Uruguay.

Among the important resolutions adopted at the Montevideo Conference was one providing for the future codification of international law. In its broad outlines the resolution provides for the maintenance of the International Commission of Jurists created by the Rio Conference of 1906, to be composed of jurists named by each government; for the creation by each government of a National Commission of Codification of International Law, and for the creation of a Commission of Experts of seven jurists charged with the duty of organizing and preparing the work of codification. The Pan American Union has received from the member governments the names of the candidates from which the commission of seven experts shall be selected, and has forwarded the complete list to the governments in order that they may indicate their choice for membership on the committee.

Another important resolution adopted at Montevideo was a recommendation for the adoption of a pact referring to multi-lateral commercial treaties which should include stipulations by which countries should be obliged not to invoke the unconditional most-favored-nation clause in bilateral treaties, without assuming the corresponding obligations. Such an agreement was drawn up by the Pan American Union and has been signed by the following governments: United States, Panama, Cuba, Nicaragua, Belgium, Guatemala, Greece, and Colombia.

In addition to the International Conferences of American States which meet every five years, a series of special or technical conferences is held in the interval between the International Conferences for the purpose of considering specialized subjects. During the year 1935 the following special Pan American conferences were held:

1. Pan American Commercial Conference, Buenos Aires, May 26-June 19, 1935.

This Conference was convened by the Argentine Government pursuant to a resolution of the Seventh International Conference of American States, and adopted a series of resolutions and signed a number of conventions having for their object the development of closer commercial relations between the republics of the American Continent.

2. Seventh American Scientific Congress, Mexico City, Sept. 9-16, 1935.

3. Third Pan American Red Cross Conference, Rio de Janeiro, Sept. 15-25, 1935.

4. Seventh Pan American Child Congress, Mexico City, Oct. 12-19, 1935.

5. Second General Assembly of the Pan American Institute of Geography and History—Washington, D. C., Oct. 14-19, 1935.

6. Labor Conference of the American States, Members of the International Labor Organization. Scheduled to meet at Santiago, Chile, on Dec. 30, 1935.

Among the other major events of an inter-American character during the year 1935 was the ratification by the Colombian Congress of the Leticia Protocol signed by the representatives of Colombia and Peru in Rio de Janeiro on May 24, 1934. The protocol had been ratified previously by the government of Peru and contains a basis for the settlement of the controversy between the two countries growing out of the Leticia incident of September, 1932. See **COLOMBIA** and **PERU** under *History*.

On June 12, 1935, there was also signed at Buenos Aires an agreement looking toward the settlement of the Chaco controversy between Bolivia and Paraguay. The agreement was negotiated through the good offices of the neutral powers meeting at Buenos Aires at the invitation of the Minister of Foreign Affairs of Argentina, Dr. Carlos Saavedra Lamas. See **BOLIVIA** under *History*.

Pan American Day was observed on April 14 in all the countries members of the Pan American Union. This day has been set aside by presidential proclamation in all the countries of the American Continent, pursuant to a recommendation of the Governing Board of the Pan American Union. The purpose of the Day is to commemorate the community of interest of the republics of the American Continent, and it is observed by colleges and universities, elementary schools, clubs, and other groups interested in international affairs.

At the meeting of the Governing Board of the Pan American Union held on November 6, Cordell Hull, Secretary of State of the United States, was reelected Chairman of the Board for the ensuing year. At the same time Felipe A. Espil, Ambassador of Argentina, was elected Vice Chairman to succeed Manuel de Freyre y Santander, Ambassador of Peru. Headquarters are at the Pan American Union Building, Washington, D. C.; L. S. Rowe, Director General; E. Gil Borges, Assistant Director.

PAN-PACIFIC UNION. THE An organization founded in 1907 for the purpose of bettering relations among Pacific peoples, chiefly through the calling of frequent conferences in all lines of thought and action in the Pacific area. It has been supported in part by appropriations from the governments of the Pacific—the United States, Canada, Australia, New Zealand, Japan, China, Siam, the Netherland East Indies, French Indo-China, and Mexico. It is now urged that these governments take over the machinery of the Pan-Pacific Union, financing it as their official mouthpiece, and that the Union's honorary heads, the presidents, premiers, and governors of Pacific lands, gather periodically in Honolulu for a friendly conference on Pacific affairs.

During 1934 the director of the Union, Alexander Hume Ford, continued his travels in China, Japan, and the Philippines, organizing student and adult Pan-Pacific clubs which function as open forums for the peoples themselves. The official organ of the Union is the *Mid-Pacific Magazine*. Walter F. Frear, a former governor of Hawaii, is president. The central executive office is in Honolulu, at 1067 Alakea St.

PAPER AND PULP. The capacity of the entire paper-making industry in the United States is placed at 13,898,850 tons of paper per year on the basis of 1935 equipment. On this basis, accord-

ing to the estimates of *The Paper Trade Journal*, the production reached 74 per cent of the total capacity, with an output of 10,307,000 tons. This is the highest output since 1929 and is within 8 per cent of the peak production of 11,140,235 tons in that year. The estimate places the output of 1935 at 1,120,400 tons in excess of that of 1934. By grades, the estimated production of 1935 in the United States in comparison with the actual production in the years 1929 and 1934 is shown in the accompanying table.

Grade	1929	1934	1935
Writing paper	607,590	417,859	480,500
Cover paper	28,072	17,011	20,500
Book paper	1,497,912	1,055,247	1,194,000
Wrapping paper	1,605,783	1,356,115	1,570,000
Newsprint	1,409,169	989,705	939,000
Paperboard	4,451,187	4,073,261	4,693,000
Tissue paper	387,811	397,196	425,000
Building paper	659,178	327,866	426,000
All other paper	493,533	552,338	559,000
Total	11,140,235	9,186,598	10,307,000

In Canada, according to the same authority, the paper mills produced 3,069,516 tons of paper in 1935 as compared with 2,419,420 tons in 1934.

The combined production in 1935 of all grades of pulp in the United States, as given by *The Paper Trade Journal*, was 4,895,000 tons, as compared with 4,490,859 in 1934. Canadian production was estimated at 3,681,000 tons as against 3,566,914 tons in 1934.

PAPUA, pāp'u-a; pā'pōō-ā, TERRITORY OF. A Territory of Australia, consisting of the south-eastern area of the island of New Guinea (87,786 sq. m.) and the Woodlark, D'Entrecasteaux, Louisiade, and Trobriand groups of islands (2754 sq. m.). Total area, 90,540 sq. m.; total population (June 30, 1934), 276,107 including 1107 Europeans and 275,000 natives (estimated). Capital, Port Moresby.

Production and Trade. The main agricultural products were coconuts, and rubber. Sisal hemp, coffee, kapok, Mauritius beans were other crops. Gold (19,497 oz. exported in 1933-34), silver, osmiridium, and copper were the principal minerals. For 1933-34, imports were valued at £220,227; exports, £249,135 including gold (£45,933), rubber (£61,324), copra (£42,990), and desiccated coconut (£48,000). The ocean shipping that entered and cleared during 1933-34 aggregated 373,895 tons. In 1934-35, imports totaled £269,299; exports, £294,743.

Government. Revenue for the year ended June 30, 1934, inclusive of a subsidy of £40,000 from Australia, totaled £121,147; expenditure was £121,199. A lieutenant-governor, aided by an executive council and a legislative council, administers the Territory. Lieutenant-Governor in 1935, Sir J. H. P. Murray. See **EXPLORATION**.

PARAGUAY, pā'r-ā-gwā. An inland republic of South America. Capital, Asunción.

Area and Population. The area of Paraguay proper, lying east of the Paraguay River, is estimated at 61,647 square miles. Ownership of the Chaco Boreal on the west bank of the Paraguay, with an area of about 100,000 square miles, is in dispute between Bolivia and Paraguay. On Dec. 31, 1933, the estimated population of Paraguay was 900,000, including 67,500 in the Chaco Boreal, and that of Asunción was 94,456. Other towns, with their estimated 1933 populations, are: Villarrica, 35,260; Carapeguá, 17,130; Luque, 15,967. The people are mainly of mixed Spanish and Guarani Indian blood, with a small white ruling class. Spanish

and Guaraní are the spoken languages; Spanish, the official language.

Education. Illiteracy is widespread, and the educational system was being reorganized in 1935 in an effort to improve educational standards. Educational facilities in 1934 consisted of 1630 public and private elementary schools, with 104,994 pupils; 9 secondary schools, with 2111 pupils; and the National University at Asunción with 528 students.

Production. The people are engaged mainly in agriculture, stock raising, and lumbering. Yerba maté (native tea), tobacco, cotton, sugar, corn, rice, beans, oranges, mandioca, sweet potatoes, and ground-nuts are the principal crops. The 1933-34 cotton crop was 30,000 metric tons (unginned). The 1934-35 tobacco crop was estimated at 40,000 to 50,000 bales (of 220 lb. each), against about 10,000 bales in 1933-34. Sugar production in 1934 was about 3500 metric tons. Cattle in 1933 numbered about 3,243,900; horses, 295,000; sheep, 202,544; swine, 48,626. The cattle herds were greatly reduced by government requisitions and drought in 1934. The quebracho trees of the Chaco yield an extract widely used in tanning, of which the 1934 production totaled about 48,000 metric tons. Deposits of iron, manganese, and copper remain largely undeveloped. The chief manufactures are tinned meat, animal by-products, quebracho extract, beverages, and shoes.

Foreign Trade. Imports in 1934 were valued at 11,340,000 gold pesos (7,159,691 in 1933) and exports at 12,372,000 gold pesos (9,767,520 in 1933). A considerable portion of the goods entering Paraguayan trade are reshipped at Buenos Aires. In 1933 animal products accounted for 3,631,020 gold pesos of the total exports; forest products, 3,573,999 gold pesos; agricultural products, 2,489,231 gold pesos. Cotton textiles, foodstuffs, vehicles, and boats are the principal imports.

Finance. Exclusive of war and national defense expenditures, the budget estimates for the fiscal year ended Aug. 31, 1934, placed receipts at 5,704,080 gold pesos and expenditures at 3,062,337 gold pesos. The actual budgetary situation had not been made public since the outbreak of the war with Bolivia in 1932.

The public debt on Nov. 30, 1933, was reported at 8,456,304 gold pesos (external, 3,345,742; consolidated internal, 3,381,477; floating, 1,729,085). The gold peso exchanged at an average of about \$0.67 in 1934, \$0.7280 in 1933, and \$0.5844 in 1932.

Communications. Asunción, situated 950 miles up the Paraná-Paraguay rivers, is accessible to vessels of 12-foot draft. In 1933 3495 vessels of 363,733 tons entered the port of Asunción and 4008 of 411,569 tons cleared. The railway mileage in 1934 was 669, including 232 miles of the Paraguay Central Railway linking Paraguay with the Argentine railway network. Several logging railways run westward from the Paraguay River into the Chaco Boreal. Motor bus lines connect some of the principal towns but the country roads are for the most part passable only to bullock carts.

Government. The Constitution of 1870 vested executive power in a President, elected for four years, and legislative power in a Congress of two houses—the Senate of 20 members elected for six years (one-third every two years) and the Chamber of Deputies, of 40 members, elected for four years (one-half every two years). President in 1934, Dr. Eusebio Ayala (Liberal), who assumed office Aug. 15, 1932.

History. The end of the Chaco War on June 14, 1935, found Paraguay in possession of a large part

of the territory in dispute with Bolivia (see BOLIVIA under *History* for a description of the military developments and peace negotiations). Although unexpectedly successful in the military struggle, Paraguay apparently suffered far more than her larger and wealthier opponent in an economic and financial way. The financial strain resulted in drastic inflation of the currency and a resultant rapid rise in prices which caused much suffering and economic dislocations. The Paraguayan peso was purchasable at 300 to the dollar in September, 1935. The government had requisitioned all official foreign exchange for the purchase of munitions and war supplies. Payments on foreign debts were defaulted. A moratorium, declared on commercial debts, was extended to May 31, 1936. Salaries of public employees were months in arrears and foreign business with Paraguay was transacted on a strictly cash basis. In order to augment its income, the government in April introduced legislation in Congress for the establishment of an Administration of Industrial Control and of State Monopolies. The state monopolies were to include gasoline, alcohol and alcoholic beverages, and beverages distilled from sugar cane. On Aug. 17, 1935, the official exchange rate was changed from 1875 Paraguayan pesos to one Argentine peso to 25 to one, respectively.

President Ayala dealt with these pressing economic and social problems in his message to Congress of Apr. 1, 1935. He urged that instead of resorting to foreign loans the government should take the lead in a "rational organization of the domestic security market." He requested an appropriation for expert aid in establishing a modern system of accountancy and of financial supervision over treasury operations. With Paraguay's manpower depleted by the Chaco War, the government took steps toward the provision of land and homes for the relatively large class of landless, migratory agricultural laborers. It also attempted to encourage the immigration of foreigners and especially of experienced farmers. It was reported in May that the Dukhobors of western Canada, after long conflict with governmental authorities there, had arranged to purchase a large tract of land in the Chaco Boreal for the establishment of a colony. A Mennonite settlement, established in the Chaco Boreal in 1927, was reported to have prospered. It supported a population of 6000 in 1934.

On Nov. 10, 1935, the Paraguayan Foreign Office formally protested the alleged illegal occupation by Argentina of a strip of territory 15 to 25 miles wide and 125 miles long along the southern border of the Chaco Boreal. The Argentine-Paraguayan frontier in the Chaco was fixed in 1878 by the arbitral decision of President Hayes of the United States, who ruled that it followed the main arm of the Pilcomayo River. An Argentine-Paraguayan commission found that the southern branch was the main arm. In 1934, however, the main channel was reported to have shifted from the southern to the northern branch. Argentine troops then advanced the boundary to the northern arm of the Pilcomayo. Paraguayan sources charged that the main stream of the river was diverted to the northern branch by Argentine military engineers. The territory involved, however, had little economic importance.

PARK COLLEGE. A nonsectarian institution for the higher education of men and women at Parkville, Mo., founded in 1875 and cooperating with the Presbyterian Church in the United States of America. The enrollment for 1935-36 totaled 506;

faculty numbered 36. Endowment funds totaled \$1,730,000, from which the income was \$71,125. Tuition and fees amounted to \$108,000 and donations to \$42,600. The library contained 27,311 volumes. A new addition to the gymnasium and a new chemistry laboratory were erected during the year. President, Frederick W. Hawley, D.D., LL.D.

PARKS, NATIONAL. On the basis of the fiscal year, July 1, 1934, to June 30, 1935, in his annual report to the Secretary of the Interior, the Director of the National Park Service, Arno B. Cammerer, stated that visitors increased 22 per cent over the preceding year, which up to that time had been the banner year of national park history. Reported visitors to national parks, monuments, and other areas of the system amounted to 6,337,206. This figure does not show the total travel.

Continuation of the Emergency Conservation Work programme allowed the Service to benefit to a still greater degree in conservation activities for protection of the parks, and provided material expansion in the programme for state, county, and metropolitan parks. Records show an increase in state parks of 67,300 acres of land during the seven months from Sept. 1, 1934, to Apr. 1, 1935, and this area has been added to since. These additions were in 25 of the 48 States.

Legislation extending the Emergency Conservation Work for a 2-year period made possible an allotment of 600 CCC camps to the National Park Service for the period Apr. 1 to Sept. 30, 1935, with 118 camps in national parks and monuments and 482 in state park areas. This activity has been extended to the Hawaiian Islands and the Virgin Islands. In all approximately 150,000 young men have been engaged in this work.

When the National Ski Association last December selected Mount Rainier National Park for its national championship ski races, it focused definite attention on the opportunities for winter sports in the mountainous national parks which enjoy mild climates and are easily accessible. The meet attracted 7000 visitors. Mount Rainier also was the scene of tryouts for contestants to represent the United States in the next Olympic games. Yosemite National Park was another important centre in winter sports, as many as 500 people in one day using the ski fields. There were similar activities in other parks. Of the 24 national parks, 18 now remain open the year around. Winter is the ideal season for visits to Death Valley.

A number of scientific discoveries were made during the year in national park areas. Although scientists had believed no fossil finds would be made in Death Valley, a park employee discovered there practically the entire skull of a titanothere, a prehistoric animal of the rhinoceros tribe. Later another skull of the same type was unearthed. There has been only one other discovery of fossil bones of this animal west of the Rocky Mountains, and the skulls discovered were the first. Dinosaur tracks were uncovered by CCC workers in Zion National Park, and a 50-foot dinosaur skeleton was found a mile from the Colorado National monument boundary.

The National Park Service continued to be active in the protection of wild life. Among projects completed with this end in view were the construction of small reservoirs and the conservation of spring water in the arid southwest areas, boundary fencing to protect game ranges, construction of fenced quadrates to facilitate range studies, installation of bear-proof devices, and erection of storm and feed shelters for birds in eastern areas.

Due to the activity of the Interior Department and the National Park Service, the trumpeter swan, the largest American water-fowl, appears to have been saved from extinction.

The addition to the system of the Dry Tortugas Islands, to be known as Fort Jefferson National Monument, will contribute to the conservation of bird life. The sooty and noddy terns are not known to nest elsewhere in the United States.

Fire prevention and forest protection were carried on very largely during the fiscal year under Public Works and Emergency Conservation Work appropriations and the reports of those agencies detail the greater part of this activity. A very creditable fire record, despite the previous dry summer, was made. The presence of the ECW camps was of immense assistance as a protective measure.

Changes in the status of park and monument lands were mainly in the direction of new acreage for existing members of the system. No new parks were created and but one national monument. There are now 24 national parks, 1 national historical park, 68 national monuments, 11 national military parks, 10 battlefield sites, 4 miscellaneous memorials, and 11 national cemeteries, comprising a total acreage of 15,249,333, exclusive of the National Capital parks, which include 683 reservations covering 6775 acres, which are administered as a separate unit.

PASADENA TUNNEL. See TUNNELS.

PATHOLOGY. See BOTANY.

PAYNE, JOHN BARTON. An American lawyer and chairman of the American Red Cross, died in Washington, D. C., January 24. Born at Pruntytown, Va. (now in W. Va.), Jan. 26, 1855, he was educated in the schools of Farquier Co., Va., going to work in a store at the age of 15. Later he was employed by the clerk of a neighboring town, during which time he devoted himself to the study of law, and was admitted to the bar in 1876, beginning to practice at Kingwood, W. Va., where he remained until 1882. He became actively interested in Democratic politics, serving as chairman of the Preston County Democratic committee from 1877 to 1882, and being sent as a delegate to state and congressional conventions.

In 1882, desiring a wider field for his activities, he moved to Chicago, where his talents as a lawyer soon won him recognition. He was counsel in many important cases, and was successful in defending the 14 Chicago packers indicted under the Sherman Act, and the American Car Co., the dissolution of which was sought for alleged violations of that Act. He was elected president of the Chicago Law Institute in 1889, and four years later became judge of the Superior Court of Cook County, being the only successful Democratic candidate. In 1898 he resigned from the bench and resumed the practice of law, retiring on Jan. 1, 1918. From 1911 to 1926 he served on the board of South Park Commissioners, Chicago.

In 1917, Judge Payne was appointed counsel to the U.S. Shipping Board Emergency Fleet Corporation by President Wilson, and in the following year also general counsel of the U.S. Railroad Administration. In this latter position he supervised all the legal work connected with the Government's control of the railroads, preparing the contracts, settling claims, protecting property, and handling the negotiations relating to the compensation due the railroads used by the Government. He held these positions until 1919 when he was appointed chairman of the U.S. Shipping Board. In 1920, the

President appointed him Secretary of the Interior, and he held this office until Mar. 4, 1921. During his administration of the Department of the Interior, he devoted considerable effort to the conservation of petroleum and of the national parks, and put into effect the Oil Leasing Act. Also, he served as director general of railroads from May, 1920, to April, 1921.

In 1921, President Warren G. Harding offered him the chairmanship of the American Red Cross which he accepted on the condition that no salary be paid to him. It was under his leadership that all the Red Cross organizations in the Americas were incorporated under one charter. Under his direction the Red Cross rendered aid in the famine of the early 1920's in the Near East; sent supplies to the value of \$11,750,000 to Japan in the earthquake of 1923; aided about 40,000 persons at a cost of nearly \$4,500,000 during the Florida hurricane of 1926; extended aid to 637,000 sufferers at a cost of \$17,000,000 during the Mississippi floods of 1927. The last was considered the greatest relief project in time of peace on record. Relief was extended also to the stricken peoples of the West in the drought of 1930-31.

In 1922 Judge Payne was elected president of the League of Red Cross Societies, organized after the World War by representatives of Great Britain, France, Italy, Japan, and the United States. He held this office until his death. In 1923, he served as a U.S. Commissioner to negotiate recognition of Mexico.

Because of his tireless devotion to the work of the Red Cross, he was honored by almost every country and had received Red Cross medals from 17 nations.

PEACE. British Peace Ballot, THE. The final results of the British peace ballot were made public on June 27. Nearly 12,000,000 votes were cast representing more than 37.9 per cent of all voters over 18 years of age in Great Britain and Northern Ireland. In one community 86 per cent of those eligible voted. For all of Wales the average was 62 per cent. The vote on the different questions was as follows:

1. Great Britain's membership in the League of Nations, Yes, 95.9 per cent.
2. Reduction of armaments by international agreement, Yes, 90.5 per cent.
3. Abolition of military aircraft by international agreement, Yes, 82.4 per cent.
4. Prohibition of private arms manufacture, Yes, 90.1 per cent.
- 5A. Combined economic and non-military measures against an aggressor nation, Yes, 86.7 per cent.
- 5B. Military measures against an aggressor nation, Yes, 58.6 per cent.

The votes cast totaled 11,559,165 and were distributed as follows:

Question	Yes	No
1	11,090,387	355,833
2	10,479,489	862,775
3	9,533,558	1,689,786
4	10,417,329	775,415
5A	10,027,608	635,074
5B	6,784,368	2,351,981

Coöperation of the United States with other governments and the League of Nations to reduce international tension is the first point of a 10-point American peace programme adopted by the Annual Meeting of the National Council for Prevention of War. The 10 points are:

(1) Reduction of Economic Tensions—Cooperation by our government with other governments and with the League of Nations for reduction of international tensions through such measures as stabilization of currencies, low-

ering of tariff barriers, improvement of inferior labor standards, and adequate access to raw materials.

(2) Mandatory Embargo Legislation—Enactment of legislation, before the present embargo law expires, embodying the following provisions:

(a) Mandatory embargo, as to the parties to an armed conflict, of arms and munitions of war, of loans and credits, and of such secondary munitions as minerals, oil and cotton; the carrying out of the provisions to be entrusted to the domestic civil authorities at ports of departure and not to military or naval action.

(b) Shipment of goods not otherwise prohibited to be at the shipper's risk during periods of armed conflict, and United States citizens traveling abroad to do so at their own risk.

On this question of embargo legislation the NCPW recognizes sincere differences of opinion about methods of preserving or restoring peace, and acknowledges them as valuable contributions to the process of finding the right solutions of unsolved questions of great importance and difficulty.

(3) "Peace in the Pacific" programme—(a) Recognition of the fact that provision for the relief of the present world economic situation is fundamental to the maintenance of peace in the Pacific. The "gentlemen's agreement" on trade relations recently negotiated with Japan by the State Department is heartily commended.

(b) Early repeal of the Oriental Exclusion Acts, placing China and Japan on an immigration quota basis (Japan's annual quota, 185; China's 105), as an expression of justice and recognition of fundamental racial equality.

(c) Acceptance in principle of the recommendations of the Lytton Commission of Inquiry and continued non-recognition of "Manchoukuo."

(d) Recognizing that it is not the policy of our government to protect by armed force our investments and interests abroad, insistence at the scheduled Naval Conference upon drastic reduction of tonnage and expenditure with no increases in the name of parity or any other arbitrary ratio.

(e) Widespread education concerning the entire Far Eastern problem, including all available data regarding the internal struggle in Japan between militarism and liberalism, and the internal situation in China towards reconstruction and national unity.

(f) Study of the problems of the second generation Chinese and Japanese on the Pacific Coast and in Hawaii and sincere cooperation in their struggle for social adjustment and for the rights of citizens.

(4) Amendment of the Philippines Independence Act—Revision of our tariff agreements with the Philippines on a reciprocal and equitable basis, abandonment of the U.S. naval base in the Philippines, and negotiation with other nations for perpetual neutralization of the Islands.

(5) Universal Draft Bill—Emphatic opposition to any universal draft bill.

(6) Military Disaffection Bill—Emphatic protest against the steadily mounting and ominous increases in expenditures for our army and navy as conducive to war and not to peace.

(8) World Court and League of Nations—Membership in the World Court and in the League of Nations on the basis of Senator Pope's resolution, which excludes commitment to the use of armed force and calls for recognition of the obligations of the Pact of Paris as the fundamental principle of the League Covenant.

(9) Military Training and Supreme Rights of Conscience—Support of the Nye-Kvale Bill to eliminate the compulsory feature of military training in civilian educational institutions, and encouragement of the rising tide of opinion and action, especially in the churches, to maintain the supreme rights of conscience.

(a) Through seeking revision of our citizenship requirements.

(b) Through making military drill optional in educational institutions where it exists, and

(c) Through aiding students who seek exemption from compulsory drill because of conscientious objections. We further declare our opposition to the entire programme of military training in educational institutions as being a systematic cultivation of the military mind and the perpetuation of a type of education which, when tested by its physical, moral, or intellectual results, does not justify its cost.

(10) Freedom of Teachers and of the Press—Recognizing that the establishment of peace in the world requires an intelligent public opinion, to which a free press and adequate educational institutions with free teachers are prerequisite, emphatic protest against curtailment of expenditures for public education and against any and all steps, such as the teacher's oath, designed to abridge the freedom of teachers and of the press.

Kellogg-Briand Peace Pact. Ethiopia appealed to the United States pointing out that Italy, one of the signatories to this treaty by which war "as an instrument of national policy" is formally renounced, was plainly threatening to use war as

the instrument of her national policy of subjugating the Ethiopian nation. The United States politely told Ethiopia that the United States would have nothing to do with that quarrel, and referred the Africans to the League of Nations.

Miscellaneous. The churches of the world have been doing some plain speaking in the face of the ominous drift toward war. The Executive Committee of the Universal Christian Council, at its meeting in Switzerland in late August, deeply moved by the threatened war between Italy and Ethiopia, appealed "to the whole of Christendom to unite in prayer and in declaring that such a war, undertaken without recourse to arbitration or other means of peaceful settlement, is an intolerable wrong to mankind and a sin against the law of Christ."

The Pope, on August 27, characterized wars of conquest as "something indescribably bad and horrible," and held that "the right of defense has limits of moderation which must be observed in order that the defense may not be guilty." The position of the Roman Catholic Church in Italy gives significance to this utterance.

The World Alliance for International Friendship Through the Churches affirmed the conviction that "any nation which breaks its plighted word not to use other than pacific means for settling international disputes will stand condemned not only by the moral judgment of human society but by the teaching and spirit of Jesus Christ." The Alliance also declared that "wherever a State makes claims which the Christian conscience feels to be against divine law, Christians must refuse to follow or to cooperate." The Alliance appealed for "a new foundation" for peace "through a firm determination to banish war by promoting arbitration and general disarmament, by engendering respect for treaties, and by strengthening and making more effective the League of Nations."

The World Convention of Churches of Christ, held in Leicester, England, in August, expressed its sincere hope "that the peace of the world will not be ruptured by war between Italy and Abyssinia." The growing militarism evidenced in new naval, army, and aircraft races was deplored and the conviction was recorded that "the inevitable end of such armament races is war."

The Archbishop of Canterbury and the Archbishop of Upsala, Primate of Sweden, recently dispatched a strongly worded telegram to the Secretary-General of the League of Nations "to prevent the outbreak of a war between two members of the League, which would shock the conscience of the world."

In Australia, the General Conference of the Methodist Episcopal Church declared that "war is contrary to the spirit, teaching and purpose of the Christian conscience, enlightened as it is with the Spirit of Christ." They also declared their "repudiation of war, of the manufacture of armaments, of exploitation of weaker nations, of secret treaties which involve the honor of the nations without the consent of the people, and of a narrow nationalism which refuses to recognize other members of the human family."

In the *Congressional Record* of September 10, as part of an address made by Congressman Maverick of Texas, there was reprinted a memorandum which had been circulated by the Naval Intelligence Section of the Department of the Navy, falsely describing the Federal Council of Churches, along with certain other organizations, as giving "aid and comfort to the Communist movement and

party." The same charge was repeated in substance by Admiral Standley, Chief of Naval Operations, in Atlantic City on September 17 in an address in which he attacked all those who were opposed to a great naval expansion.

A letter from the General Secretary of the Federal Council to the Secretary of the Navy, requesting information as to whether it is a policy of the Navy Department to allow any of its bureaus to be used as an agency for purposes of libel and slander of civilian organizations, brought only an evasive reply. The request for information was repeated in two subsequent letters to the Secretary of the Navy without any more satisfactory results. According to the Federal Council, evidence from other quarters indicated that something like a general barrage against the Protestant churches in general and the Federal Council in particular was being carried on by some of the officials of the Navy Department, who were determined to undermine the influence of any persons or groups who oppose their plans. The officers of the Federal Council therefore felt it necessary to take the matter to the White House. A conference was held with President Roosevelt by representatives of the Federal Council on November 20. He immediately voiced his concern over what had happened, displayed great regret that any group in the Navy Department should have so far transgressed its proper function as to make criticisms of the Federal Council and of the churches, and expressed his own confidence in their work. He not only disavowed the statement made about the Federal Council by officials of the Navy Department but also said that he would send word to both the Army and Navy Departments that henceforth they are to make no comment about any civilian organization and its politics, whether favorable or unfavorable, without his specific consent.

The Twenty-Fifth National Peace Congress of Great Britain was held June 28th to July 2d at the Friends' House in London. A distinguished group of speakers attended. The general subjects discussed were "Peace and the Pacific," "Peace and the British Empire," and "Towards a Collective System."

Prof. James T. Shotwell of Columbia University was elected President of the League of Nations Association. His predecessors in this office were former Associate Justice John H. Clarke, the late George W. Wickersham, and Raymond B. Fosdick.

PEARSON, ALFRED CHILTON. An English scholar and educator, died in London, Jan. 2, 1935. Born Oct. 8, 1861, he was educated at King's College School, London, and was graduated from Christ's College (Scholar), Cambridge in 1879, earning 1st class Classical Tripos, Part I, 1881 and Part II, 1883. Also, he highly distinguished himself in the examination for the Chancellor's Classical Medal in 1883, and was awarded the Hare Prize in 1889. Four years before this he was called to the bar of Lincoln's Inn, and in 1890 he accepted the position of second master at Bury St. Edmund's School, and two years later became Sixth Form master at Ipswich School. In 1893 he became assistant master at Dulwich College, where he remained until 1901. In 1900 he was appointed an examiner to the Oxford and Cambridge Schools' Examination board, and served as an examiner in the Civil Service Commission from 1914 to 1919.

His researches in the classics led to his appointment as Gladstone Professor of Greek at Liverpool

University in 1919, and Regius Professor of Greek at the University of Cambridge in 1921. He retired as Emeritus Professor because of ill health in 1928. In 1921 Professor Pearson became a Fellow of Trinity College, Cambridge, and in the following year was made an honorary fellow of Christ's College. He lectured at the Royal Institution (1923), and at Midland Institute (1924). From 1922 to 1925 he served as a governor of Dulwich College, and in 1926, Manchester University conferred upon him the honorary degree of Litt.D.

In his studies, Dr. Pearson abandoned the traditional belief of Jebb that the Laurentian manuscript had a monopoly of the truth and gave credence to other manuscripts and to the work of Greek lexicographers. He was never a slave to any particular theory and scorned to pass off some interesting error as truth. He was a frequent contributor to *Classical Review*, *Classical Quarterly*, and the *Journal of Philology*, and also supplied material for Hastings's *Encyclopædia of Religion and Ethics*. He edited W. G. Headlan's *Æschylus' Agamemnon* (1910); *Fragments of Sophocles* (3 vols., 1917); and a critical text of the seven extant plays of Sophocles in the Oxford Classical texts series (1924). His own writings included, *Fragments of Zeno and Cleanthes* (1891), the fruit of his work for the Hare prize; editions of Euripides' *Helena* (1903); *Heraclida* (1907); *Phoenissæ* (1909); an abridgment of Jebb's *Sophocles' Ajax* (1907); *Inaugural Lecture on Verbal Scholarship*, and a lecture on *Tragedy and Comedy* at the Leeds Branch of the Classical Association (1925).

PECK, ANNIE S. An American mountain climber and lecturer, died in New York City, July 18, 1935. She was born in Providence, R. I., Oct. 19, 1850, and in 1878 graduated from the University of Michigan, later studying in Germany from 1884-85. In the latter year she attended the American School of Classical Studies in Athens, being the first woman to do so, and specialized in Greek and archaeology. Upon her return to the United States she turned to teaching, first in the public schools of her native city, and later in schools in Saginaw, Mich., Cincinnati, Ohio, and Montclair, N. J. Subsequently, she taught Latin at Purdue University and at Smith College. In 1887 she began to give private lectures on Greek and Roman archaeology, and three years later entered the public lecture field, speaking on Greek archaeology, mountain climbing, and South America.

Her first experience in mountain climbing was obtained by her ascent of Mt. Shasta, Calif., in 1888. In 1895 she conquered the Matterhorn, and two years later Popocatepetl and Orizaba, reaching an altitude of nearly 18,500 ft., the highest point then attained by a woman. In 1900 she ascended Funfingerspitze in the Tirol and also the hazardous Jungfrau. In the early part of the century she became interested in locating a peak higher than Aconcagua (23,080 ft.) in the Andes, and in 1903, 1904, 1906, and 1908 explored South America, reaching 20,500 ft. on Mt. Sorata in Bolivia in 1904. In that year, as well as in 1906, she attempted the ascent of Mt. Huascarán in Peru, but only reached 18,000 ft. On Sept. 2, 1908, accompanied by Swiss guides, she reached the summit of 22,045 ft. Here she established a record of ascending to the highest altitude ever attained by an American on the western hemisphere. For her exploit she was decorated with a gold medal by the Peruvian Government, and the northern peak of the twin mountain was named Cumbre Ana Peck in her honor by the Lima Geographical Society, which also awarded

her the silver slipper (stirrup). In 1911 she published an account of the difficulties and hazards of this ascent in her book, *A Search for the Apex of America*.

She made her first ascent of Massif Coropuna (21,000 ft.) in southern Peru in 1911. In 1930, in her 80th year, she ascended Mt. Madison in the White Mountains, a distance of 5380 ft., and Mt. Crescent in Randolph, N. Hamp., 3280 ft. high.

Through her exploration, she became deeply interested in things South American, and went as delegate to the second Pan-American Conference of Women in connection with the third Pan-American Scientific Congress, held in Lima, and was the only United States delegate to read a paper in Spanish. In 1900 she was the official delegate from the United States to the International Congress of Alpinists in Paris. Before South American audiences she lectured in Spanish and Portuguese on the United States industries and educational institutions in 1915 and 1916, and in 1922 attended the Brazil Centennial Exposition. She made her ninth visit to the South American continent in 1925, and her tenth visit, made by aeroplane, occurred in 1929-30. On her 80th birthday she received the Order Al Merito of the Chilean Government.

Two of the most authoritative volumes written on South America—*The South American Tour* (1914, 1924) and *Commercial and Industrial South America* (1922, 1927)—were written by Miss Peck. In 1932 she wrote *Flying Over South America—20,000 Miles by Air*.

PEMBA. See ZANZIBAR PROTECTORATE.

PENANG. See STRAITS SETTLEMENTS.

PENNSYLVANIA. Population. On Apr. 1, 1930 (Fifteenth Census), 9,631,350; July 1, 1934 (latest Federal estimate), 9,826,000; 1920 (Census), 8,720,017. Philadelphia (1930) had 1,950,961 inhabitants; Pittsburgh, 669,817; Scranton, 143,433; Erie, 115,967; Reading, 111,171; Harrisburg, the capital, 80,339.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) ...	1935	2,429,000	3,241,000*	\$32,734,000
	1934	2,420,000	2,562,000*	39,711,000
Corn	1935	1,277,000	58,742,000	41,119,000
	1934	1,216,000	52,896,000	43,375,000
Potatoes	1935	198,000	22,572,000	13,543,000
	1934	200,000	34,000,000	14,620,000
Wheat	1935	904,000	18,960,000	15,171,000
	1934	869,000	14,759,000	13,582,000
Oats	1935	897,000	26,013,000	10,925,000
	1934	906,000	24,915,000	13,205,000
Apples	1935	.....	11,440,000	8,351,000
	1934	.....	8,554,000	7,870,000
Tobacco	1935	20,700	26,910,000*	3,229,000
	1934	15,200	18,255,000*	1,698,000
Buckwheat	1935	146,000	2,847,000	1,480,000
	1934	138,000	3,105,000	1,708,000

* Tons. † Pounds.

Mineral Production. Anthracite production in 1935 amounted to 51,003,000 net tons (1935) compared with 57,168,291 (1934). The wholesale piling ("bootlegging") of coal from collieries' deposits had begun by 1934 and was estimated to have totaled 3,000,000 tons for that year, but did not appear in official totals given above.

The production of bituminous coal rose to some 90,795,000 net tons (1935) from 89,825,875 (1934). Coal to the quantity of 11,207,690 tons (1934), used in coke ovens, yielded 7,554,995 net tons of coke, of which the value was \$30,158,115; more than nine-tenths of the coke came from byproduct ovens.

Blast furnaces consuming iron ore mainly from

other States produced 4,207,944 gross tons of pig iron in 1934 as against 3,733,570 in 1933. The furnaces' shipments of pig iron totaled 4,173,412 tons for 1934 and 3,952,862 for 1933; in value, \$76,740,066 (1934) and \$62,797,008 (1933). The production of steel (1934) attained 570,817 tons of Bessemer and 6,390,342 of open-hearth.

There were produced (1934) 14,516,000 barrels of petroleum, the highest total subsequent to 1898; the Bradford field predominated. Natural gas attained a yield, for 1934, of some 84,000,000 M cu. ft., 17 per cent above 1933, largely due to wells in Potter County. Producers' sales of lime (1934) totaled some 441,000 short tons, in value, \$3,110,000; those of slate attained \$1,237,477.

Education. The legislation of 1935 included the restoration of teachers' salaries to conformity with the State schedules that had been in force before the reductions made during the time of depression. The statutory restrictions on the employment of minors were increased, expectedly with the effect of increasing school attendance.

Charities and Corrections. The central body exercising in 1935 the supervisory functions over institutions maintained by the State for the care and custody of persons was the Department of Public Welfare. It had been created by statute in 1921. At its head was a Secretary of Welfare (J. Evans Scheehle, M.D.), holding by appointment for a term of four years.

The State institutions of care and custody and the numbers of their respective inmates on May, 31, 1935, were: Eastern State Penitentiary (two sites), Philadelphia and Graterford, 3143; Western State Penitentiary, Pittsburgh and Rockview, 1995; Pennsylvania Industrial School, Huntingdon, 1247; State Industrial Home for Women, Muncy, 265; Pennsylvania Industrial School, Morgantown, 573; eight State hospitals for mental disorders, at Allentown (1634), Danville (1915), Fairview (791), Harrisburg (1905), Norristown (3483), Torrance (1628), Warren (2048), and Wernersville (1374); three institutions for mental defectives, at Pennhurst (1742), Polk (2924), and Laurelton (670); a State Colony for Epileptics, at Selinsgrove, 441; and ten medical and surgical hospitals (chiefly for special needs in mining districts), at Ashland (171), Blossburg (92), Coal-dale (81), Connellsville (78), Hazelton (148), Locust Mountain (51), Nanticoke (113), Philipsburg (105), Scranton (184), and Shamokin (107).

Legislation. Governor Earle, shortly after taking office, recommended to the Legislature a number of taxes designed to produce revenue at the rate of \$5,000,000 a month, with which to meet part of the cost of subsistence for the needy unemployed, as demanded by the FERA. He also proposed the enactment of other taxes, for divers purposes, so that the total of the new taxes sought approximated \$125,000,000 a year. The taxes to meet the FERA's requirements were enacted. Later was enacted a graduated income tax, taking 2 per cent on the yearly net income of \$5000 or less, and rising to 8 per cent on net of \$100,000 and over. The chief taxes enacted, other than the income tax, were: repeal of manufacturers' exemption on capital stock; increase of the levy on utilities' gross receipts to 14 mills on the dollar, from 8 mills; a net-income tax on corporations at 6 per cent; an excise of a cent a package on cigarettes; a levy of five cents per \$100 on the face of documentary papers; an increase to five cents a gallon, from three cents, in the tax on sales of gasoline; and a tax of 4 per cent on the cost of admittance to amusements. The budget, as adopt-

ed, provided \$301,088,837 for the ensuing two years.

Provision was made for the payment of State pensions to blind persons through an appropriation of more than \$3,000,000. The penalties against delinquency in the payment of taxes were abated on condition of payment by November 1. A law over a century old, recently again invoked by tax collectors, providing imprisonment for failure to pay taxes, and another law allowing sale of chattels for unpaid taxes, were repealed.

At the instance of Governor Earle the Legislature voted a proposal for revision of the State's constitution by a convention, provided that the popular vote should approve. An act was passed to prohibit discrimination against persons "because of race, creed, or color" in places open for public patronage. The private right to bring civil suit on the ground of alienation of affection or breach of promise to marry was abolished, under the pressure of a simultaneous movement in many States to end the common abuse of such suits.

Political and Other Events. Governor Earle, the first Democrat in 44 years to assume the office, was inaugurated on January 15. He strongly advocated, at various times, broad "modernizing" alteration of the constitutions of both State and Nation.

At a special election held on September 17 the popular vote rejected by a heavy majority the submitted proposal for a constitutional convention. The strength of the influence of the labor unions, which favored the idea of "modernized" constitutions, and of the "new deal" sentiment evidenced in the Democratic victory of 1934, proved insufficient to overcome conservatism. Governor Earle prompted a Legislative investigation of the State Liquor Control Board, established in 1933, which had failed to develop the business of the State liquor shops to anything like the anticipated \$150,000,000 a year of Governor Pinchot's original estimate. Nothing was found against the probity of the members, but it was made to appear that the Board had made "secret contracts" with distillers and that it had purchased more stock than the shops could quickly sell. The Governor removed the Board's chairman, Robert S. Gawthrop, and another member resigned, causing vacancies for the Governor to fill by appointment.

The FERA's figures, published March 1, showed that the cost of public support for the destitute unemployed in Pennsylvania during 1934 had exceeded that for any other of the States except New York; of \$146,278,585 thus expended, the FERA had furnished \$105,761,449, or some 72 per cent; the State, \$30,065,337; and subdivisions, \$10,451,799. Some 450,000 families and single persons were stated to be dependent on this sort of public support in March, 1935, in the entire State. Improvement occurred later in the year by reason of increase in ordinary employment and through the creation of paid jobs under the Federal "work relief" programme. The President allocated \$57,572,000 on October 8 for immediate work-making enterprises in the State.

Philadelphia early in the year required \$2,500,000 a month for its needy unemployed; but the funds of the city furnished no part of the monthly cost. Mayor Moore maintained that the city had exhausted its power to borrow and that it could not safely impose heavier local taxation. In the bituminous coal field of the State the agreement executed as to wages and conditions of labor, enforced by the passage of the Guffey Coal Act, helped business in the latter part of the year. In the anthracite field widespread unemployment continued.

Idle miners in considerable number were reported to have taken to mining anthracite unlawfully on their own account, tapping the companies' coal deposits through small shafts dug in widely-scattered spots. A representative of the Anthracite Institute asserted on September 25 that stolen coal to the value of some \$20,000,000 had been sold. Juries could not be brought to convict offenders brought to trial for the thefts. During Governor Pinchot's administration had been enacted a law depriving the company-controlled Coal and Iron Police of the right to act except on companies' property. The anthracite-mining companies generally owned mineral rights only: not the land overlying the coal; they were thus powerless any longer to use the special police to stop the stealing of their coal on a huge scale. See FLOODS.

Controller S. Davis Wilson, Republican, was elected Mayor of Philadelphia on November 5, by a plurality of nearly 50,000 votes over John B. Kelly, Democrat.

Officers. The chief officers of the State, serving in 1935, were: Governor, George H. Earle; Lieutenant-Governor, Thomas Kennedy; Secretary of the Commonwealth, David L. Lawrence; Attorney-General, Charles J. Margiotti; Auditor, Frank E. Baldwin; Treasurer, Charles A. Waters; Superintendent of Public Instruction, Lester K. Ade.

Judiciary. Supreme Court: Chief Justice, John W. Kephart; Associate Judges, George W. Maxey, James B. Drew, William B. Linn, Horace Stern, H. Edgar Barnes.

PENNSYLVANIA, UNIVERSITY OF. A non-sectarian institution of higher education in Philadelphia, founded in 1740. It is composed of the college of arts and sciences, the college of liberal arts for women, the Towne Scientific School (engineering and chemistry), the Moore School of Electrical Engineering, the Wharton School of Finance and Commerce, the school of fine arts (architecture, fine arts, music), the school of education, the graduate school, and the professional schools of medicine, graduate medicine, law, dentistry, veterinary medicine. An affiliation exists with the Pennsylvania School of Social Work under which students in that School may, under certain conditions, receive University certificates and degrees. The 1935 autumn enrollment was 13,421 including all schools and departments. Of those enrolled 5630 were registered in the undergraduate schools, 2879 were registered in the graduate and professional schools, 4921 were registered in the evening, extension, and summer schools. The enrollment of the 1935 summer school was 1499. The faculty numbered 1310. The productive funds amounted to \$18,998,279. The income for the year from all sources, exclusive of hospitals and museums, was \$5,440,103. The library contained 826,037 bound volumes and 170,000 pamphlets. President, Thomas S. Gates, Ph.D., LL.D. Provost, Josiah H. Penniman, Ph.D., LL.D.

PENNSYLVANIA STATE COLLEGE, THE. A nonsectarian institution for the higher education of men and women at State College, Pa., founded in 1855. On Nov. 1, 1935, the undergraduate enrollment totaled 4802 and the graduate and special enrollments, 577. The 1935 summer session enrollment was 2826. The resident faculty numbered 731. The productive funds amounted to approximately \$517,000, and the income for operation for the year was \$4,126,039. The library contained 158,000 volumes. There became effective in September, 1934, the division of the school of liberal arts into a lower and an upper division and the reorgani-

zation of the school of education on a professional basis, offering only the last two years of undergraduate work and graduate work leading to the degrees of master and doctor of education. Extension activities of the college were coordinated under an assistant to the president in charge of extension. There were established in DuBois, Hazleton, Pottsville, and Uniontown undergraduate extension centres, after a survey had indicated that such need was not being met by any other educational agency. The college is committed to this work for only one year at a time in each centre, the courses offered not exceeding the levels of the freshman and sophomore years. President, Ralph D. Hetzel, LL.D.

PERAK. See FEDERATED MALAY STATES.

PERIM. See ADEN.

PERLIS. See UNFEDERATED MALAY STATES.

PERMANENT COURT OF INTERNATIONAL JUSTICE. See WORLD COURT.

PERSIA. See IRAN.

PERSONALITY. See PSYCHOLOGY.

PERU. A South American republic, comprising 23 departments. Capital, Lima.

Area and Population. Peru has an estimated area of 482,133 square miles and a population estimated at 6,700,000 on Dec. 31, 1933. The white population was placed at about 600,000. No census had been taken since 1876, when Indians comprised 57.6 per cent of the total population, mestizos 24.8 per cent, whites 13.8 per cent, and Asiatics 1.9 per cent. Lima had 281,425 inhabitants in 1931 and Callao 63,728. Estimated populations of the other chief cities in 1934 were: Arequipa, 70,000; Cusco, 40,000; Chiclayo, 35,000; and Trujillo, 30,000. Spanish is the language of the educated classes. The natives speak mainly Aymara or Quechua. Roman Catholicism is the state religion.

Education. Primary education is nominally free and compulsory but about 50 per cent of the population remains illiterate. The election rolls, restricted to literate male voters of 21 years or more, recorded only 392,263 names in 1931. The primary school enrollment in 1933 was 383,506; public high schools, 9440; normal and other schools, 1575. On May 10, 1935, President Benavides announced that between 1932 and 1934 the school enrollment increased by 20,000, the number of teachers by 2000, and educational expenditures by 2,000,000 soles. The University of San Marcos at Lima, closed due to student agitation in 1932, was reopened in 1935. There are smaller universities at Arequipa, Cusco, Trujillo, and Lima (Catholic University).

Production. Agriculture is the chief occupation, supporting 80 per cent of the population, although mining accounted for half the value of all exports in 1933. Cotton production in 1934-35 was about 265,000 bales (of 480 lb.) and exports in 1934 totaled 67,212 metric tons, valued at 81,705,000 soles. The price of Peruvian cotton had risen 79 per cent in two years, while production costs remained stationary. The other leading crops were: Cane sugar, 420,000 metric tons in 1934 (433,000 in 1933); coffee, 14,500,000 lb. in 1934; hulled rice, 54,843 metric tons in 1933-34; wheat, 72,800 metric tons in 1933-34. Wool production (1933) was 7500 metric tons; guano (1933-34), 150,000 metric tons; petroleum, 16,300,000 bbl. in 1934 (13,257,000 in 1933). The output of other minerals in 1933 was (in metric tons): Coal, 30,000; copper, 24,853 (27,200 in 1934); lead, 1217. The 1933 production, in kilograms, of zinc was 57,000; antimony, 40,000; bismuth, 292,433; molybdenum, 6452. Manufacturing expanded rapidly during the world economic depression of 1929-35. In 1933 there were 625 industrial establishments,

with 18,508 workers; the wages paid during the year amounted to 15,281,808 soles.

Foreign Trade. Peruvian exports in 1934 increased 18 per cent and imports 61 per cent over 1933, reaching the approximate levels of 1929. The 1934 imports totaled 171,252,000 soles (107,437,000 in 1933) and exports 305,094,000 soles (256,969,000 in 1933). The United States in 1934 supplied 27.1 per cent of the imports by value (27.4 per cent in 1933); Great Britain, 17.6 (18.0); Germany, 8.3 (9.6); France, 8.2 (3.6). Of the total exports, Great Britain in 1934 took 33.8 per cent (36 per cent in 1933); United States, 14.2 (16); Germany, 11.1 (7.3). The chief exports, in order of value in 1934, were raw cotton, petroleum, gasoline, copper bars, and raw sugar. Machinery and vehicles, cotton manufactures, and wheat were the main import items.

Imports in 1935 totaled 174,732,925 soles; exports, 308,958,162 soles. United States statistics for 1935 showed general imports from Peru of \$7,453,992 (\$6,190,978 in 1934) and exports to Peru of \$12,173,947 (\$9,891,498).

Finance. Budget estimates for 1934 and 1935 balanced at 111,199,000 and 131,313,000 soles, respectively. Actual 1934 returns were: Receipts, 126,235,000 soles; expenditures, 123,663,000 soles, leaving a gross surplus of 2,572,000 soles and a net surplus of 2,318,000 soles.

The public debt on June 30, 1935, totaled 693,671,902 soles (external, at par of exchange, 463,364,405; internal, 55,008,709; floating, 175,298,788). The sol (nominal par value, \$0.47) exchanged at an average of about \$0.23 in 1934, \$0.18 in 1933, and \$0.27 in 1932.

Communications. Peru in 1933 had about 11,200 miles of highways suitable for motor traffic and in 1934 311 miles of additional roads were completed. The Central Highway, extending 116 miles from Lima over the Andes to Oroya, was opened to traffic in June, 1935. Railways open to traffic in 1933 aggregated 2868 miles, including 640 miles of State line. Air lines connected Lima with other cities of the republic and with the inter-American air network. A modern new airport three miles from the centre of Lima was formally opened on Nov. 3, 1935. The net register tonnage of overseas shipping entering Peruvian ports with cargo and in ballast in 1933 was 14,010,000; tonnage cleared, 13,961,000.

Government. The Constitution of Apr. 9, 1933, vested executive power in a President elected by popular vote for five years and ineligible for re-election. Legislative power was to rest in a Congress of two chambers—a Chamber of Deputies of 120 members elected for five years and a Senate of 40 members elected for six years, with one-third of the Senate renewed every two years. The suffrage was restricted to literate males 21 years or more of age. The Constitution provided that until Dec. 8, 1936, when the next presidential and legislative term was to begin, the Constituent Assembly would be divided into a Chamber of Deputies and a Senate. President in 1935, Gen. Oscar Raimundo Benavides, elected by the Constituent Assembly Apr. 30, 1933, to complete the term of the assassinated President, Luis M. Sánchez Cerro.

HISTORY

Foreign Relations. The ratification by the Colombian Congress in September, 1935, of the Leticia Protocol signed by Peru and Colombia in Rio de Janeiro on May 24, 1934, permanently liquidated their boundary dispute in the upper Amazon basin, which brought them to the verge of war during

1932-33 (see *COLOMBIA* under *History*). The Peruvian Congress had ratified the treaty Nov. 2, 1934. The long-pending boundary controversy with Ecuador assumed a threatening aspect towards the end of 1935, leading the Peruvian Government to propose the submission of the dispute to the Permanent Court of International Justice at The Hague (see *ECUADOR* under *History*). Direct negotiations for a settlement of the dispute had been suspended in August, 1934.

Peru's rapprochement with her old enemy, Chile, inaugurated by the settlement of the Tacna-Arica dispute in 1929, was furthered in 1935. An important commercial treaty, greatly reducing tariff barriers between the two countries, was signed in March and ratified by the Peruvian Congress in November. Six other conventions signed with Chile on July 5 provided for closer Chilean-Peruvian collaboration with regard to civil registration, counterfeit currency, motion picture censorship, the census, judicial requests, and intellectual interchange (see *CHILE* under *History*). Five conventions of a similar nature were signed with Argentina on July 2. Peru cooperated with Argentina, Brazil, Chile, Uruguay, and the United States in the negotiations at Buenos Aires which resulted in the Bolivian-Paraguayan truce agreement of June 12, 1935. She also participated in the subsequent Chaco peace conference at the Argentine capital. See *BOLIVIA* and *ARGENTINA* under *History*.

Domestic Affairs. While the Benavides Government achieved marked success in consolidating Peru's friendly relations with her neighbors, it retained power at home only through strict repression of opposition movements, and especially of the aggressively hostile Aprista organization under Raúl Haya de la Torre. The Benavides régime, representing the conservative business and clerical elements, was the bulwark of the feudal economic and social system of Peru against the forces of radicalism and liberalism, which were determined upon the complete reorganization of the nation. In January, following an unsuccessful radical revolt in Cajamarca, President Benavides upheld the existing curbs on civil liberties. Later additional repressive measures were introduced, including more rigorous censorship of the press, the exclusion from the country of foreigners and Peruvian citizens suspected of seditious activities, and harsher penalties against terrorists. The prohibition of coeducation was another evidence of the government's conservative tendencies. On October 9 Gen. Manuel Rodríguez was named head of a reorganized cabinet, containing several new ministries.

In the economic field, the outstanding development was the continuance of the business revival which had gained rapid headway in 1934. Foreign trade, government revenues, and most other indexes of national prosperity showed substantial increases, and Peru remained one of the two South American countries which did not find it necessary to resort to restriction of foreign exchange transactions. Resumption in part of the service on the foreign debt, suspended since May, 1931, was provided for in the 1936 budget estimates submitted to Congress in September, 1935. Radical amendments to the banking law of May 23, 1931, were introduced by the decree of Mar. 14, 1935. Perhaps the most striking change was one permitting the banks to hold government obligations up to 45 per cent of their capital and reserves, as compared with the 25 per cent limit previously in effect. The threat of inflation inherent in the government's monetary policy led to the hoarding of silver coins. To counteract this, the

government on May 2, 1935, prohibited the buying, selling, hoarding, and exportation of these coins. About the same time the Banco Central de Reserva was authorized to coin and issue a new metal piece of subsidiary currency with a face value of 50 centavos or one-half sol, containing no silver.

The public works programme, in which irrigation projects received the greatest attention, was continued and expanded. Some steps were taken towards wider distribution of the land. In order to retain its export markets in Great Britain and the United States, the government on July 13, 1935, restricted imports of cotton goods from Japan to 204,000 kilograms, while the quotas for Britain and the United States were fixed at 845,000 and 476,000 kilos, respectively. Japanese textiles had made rapid inroads upon the Peruvian market.

Peru during 1935 celebrated both the 114th anniversary of its national independence and the 400th anniversary of the founding of Lima by Francisco Pizarro.

PETROLEUM. The production of crude petroleum in the United States during 1935, according to a preliminary report of the U.S. Bureau of Mines, totaled 993,942,000 bbl. (of 42 gal. to the bbl.). This was an increase of about 86,000,000 bbl. over 1934, but was slightly under the record (1,007,323,000 bbl.) of 1929. The domestic demand for motor fuel gained 6.3 per cent over 1934, with a new record of 432,556,000 bbl., as against 407,106,000 bbl. in 1934. Exports of motor fuel rose to 30,380,000 bbl. as compared with 24,686,000 bbl. in 1934. Stocks of finished and un-

finished gasoline totaled 56,693,000 bbl. at the close of the year. Comparative figures of production and consumption and stocks for 1934 and 1935 are given in Table I.

In the principal fields of the United States, Texas increased its yield to more than 391 million barrels of crude petroleum, almost half of it (175,918,000 bbl.) from the East Texas field. California rose to the second production State with 207,832,000 bbl., a gain of 33½ million barrels over 1934. Oklahoma dropped to third position with 185,348,000 bbl. The preliminary figures for 1935 as compared with 1934 for all States are shown in Table II.

TABLE II—PRODUCTION OF CRUDE PETROLEUM BY STATES

	[Thousands of barrels of 42 gallons]	
	1935	1934
Arkansas	10,973	11,182
California	207,832	174,305
Colorado	1,549	1,139
Illinois	4,305	4,479
Indiana	757	838
Kansas	54,787	46,482
Kentucky	5,255	4,860
Louisiana	49,869	32,869
Michigan	15,256	10,603
Montana	4,594	3,603
New Mexico	20,586	16,864
New York	4,237	3,804
Ohio	4,070	4,234
Oklahoma	185,348	180,107
Pennsylvania	15,830	14,478
Texas	391,097	381,516
West Virginia	3,903	4,095
Wyoming	13,650	12,556
Other*	44	51
Total United States	993,942	908,065

* Includes Missouri, Mississippi, Tennessee, and Utah

The total production of motor fuel in 1935 rose to 465,514,000 bbl. as compared with 423,801,000 bbl. in 1934. Of the total for the year, 219,583,000 bbl. were straight-run gasoline; 207,537,000 bbl. cracked gasoline; 38,858,000 bbl., natural gasoline, and 1,877,000 bbl., benzol.

In a study of the costs of producing crude petroleum, carried on in part before the invalidation of the NRA and completed voluntarily thereafter, the Petroleum Administration Board, on the basis of reports covering 67.9 per cent of the total domestic production, found that the cost of production in 1934, including interest on investment at 6 per cent and after deducting by-product sales and miscellaneous receipts, for the country as a whole per barrel of company interest oil was \$0.775; and the selling price was \$0.984. However, the per-barrel cost of individual States varied materially. To some extent the variations can be traced to fluctuations in production because a large percentage of the expenses remained the same regardless of the quantity produced. Hence, those States showing a relative gain in production sufficiently large to offset higher labor and material costs, although a few specific items may have increased, invariably showed a lower overall cost; conversely, for States showing a decline in production costs ordinarily rose in greater proportion because of these factors.

The itemized cost of production by areas for the year 1934 is shown in Table III on page 569.

It will be noted that California, with an average of \$0.595 per barrel, was the lowest cost area; while the highest, or \$1.56 per barrel, is that recorded for the Eastern States. The average for that group of States comprising the Mid-Continent-Gulf area was \$0.778, or approximately the same as that of all States, whereas States in the Rocky

TABLE I—SUPPLY AND DEMAND OF ALL OILS
[Thousands of barrels of 42 gallons]

	1935	1934
New Supply:		
Domestic production—		
Crude petroleum	993,942	908,065
Daily average	2,723	2,488
Natural gasoline	38,858	36,556
Benzol	1,877	1,708
Total production	1,034,677	946,329
Daily average	2,835	2,593
Imports—		
Crude petroleum—		
Bonded warehouses	6,635	4,863
For domestic use	25,604	30,695
Refined products—		
Bonded warehouses	12,128	10,054
For domestic use	8,309	4,882
Total new supply, all oils	1,087,353	996,823
Daily average	2,979	2,731
Decrease in stocks, all oils	22,448	37,848
Demand.		
Total demand	1,109,801	1,034,671
Daily average	3,041	2,835
Exports—		
Crude petroleum	51,378	41,127
Refined products	76,774	73,380
Domestic demand—		
Motor fuel	432,556	407,106
Kerosene	47,652	44,234
Gas and fuel oil	352,712	331,989
Lubricants	19,598	18,484
Wax	930	857
Coke	6,724	7,540
Asphalt	16,384	13,924
Road Oil	6,832	6,378
Still gas (production)	50,224	44,391
Miscellaneous	2,087	2,126
Losses and crude used as fuel	45,950	43,135
Total domestic demand	981,649	920,164
Daily average	2,689	2,521
Stocks:		
Crude petroleum	314,631	337,254
Natural gasoline	3,698	3,740
Refined products	223,371	223,356
Total, all oils	541,700	564,350
Daily supply	178	199

TABLE III—PRODUCTION COST BY AREAS

	Group A	Group B	1934 Group C	Group D	Total all groups
Production (1,000 barrels)	119,083	378,872	11,571	22,855	532,381
Expenses:					
Depletion	\$0.081	\$0.064	\$0.200	\$0.151	\$0.074
Depreciation .....	.134	.114	.154	.271	.126
Amortization of intangible development cost .....	.037	.058	.066	.205	.060
Operating cost .....	.208	.211	.298	.572	.228
General overhead and administrative .....	.171	.266	.220	.206	.241
Total .....	.632	.713	.938	1.405	.729
Less: Gas sales and miscellaneous revenue .....	.177	.026	.040	.066	.062
Net cost .....	.455	.687	.898	1.339	.667
Interest at 6 per cent on investment .....	.130	.091	.182	.221	.108
Net cost, including interest .....	.585	.778	1.080	1.560	.775
Average sales value at well .....	.907	.960	.973	1.792	.984

Group A: California.
Group B: Texas, Oklahoma, Kansas, Arkansas, Louisiana, and New Mexico.
Group C: Wyoming, Montana, and Colorado.
Group D: Illinois, Indiana, Ohio, Michigan, Kentucky, West Virginia, Pennsylvania, and New York.

Mountain area had a cost of \$1.08 per barrel.

It also appears from the same table that the lowest cost item for other than the Eastern area was amortization of intangible development cost, and for that area it is higher by 5¢ per barrel than depletion. Credits for by-products and miscellaneous revenue, which for the most part is sales of gas, approximates 6¢ per barrel for all States. In California, however, it bulks very large, amounting to \$0.177 per barrel of oil produced, or in excess of 28 per cent of the direct cost items.

PETROLEUM ACT. See UNITED STATES under *Congress*.

PHILIPPINES. The largest island group of the Malay Archipelago, transformed on Nov. 15, 1935, from an insular dependency to a self-governing commonwealth under the sovereignty of the United States. Capital, Manila.

Area and Population. Including 7083 separate islands, with a total area of 114,400 square miles, the Philippines had a population estimated on July 1, 1935, at 13,099,405 (10,314,310 at the 1918 census). The largest islands are: Luzon, 40,814 square miles; Mindanao, 36,906; Samar, 5124; Negros, 4903; Palawan, 4500; Panay, 4448; Mindoro, 3794; Leyte, 2799; Cebu, 1695; Bohol, 1534; and Masbate, 1255. About 91 per cent of the people are Christians (mostly Roman Catholics) and 9 per cent Mohammedans (Moros) and pagans. English and Spanish, the languages of government and commerce, are spoken by about 1,500,000 and 660,000, respectively. Tagalog, Ilocano, and Visayan are the chief native languages. Estimated populations of the chief cities in 1935 were: Manila, 353,418; Cebu, 82,032; Iloilo, 45,236; Laoag, 42,901.

At the 1930 census there were 45,208 Filipinos in the United States and 63,052 in the Territory of Hawaii. For the fiscal year ended June 30, 1935, 216 Filipinos entered the United States and 1016 departed, while 152 entered Hawaii and 3003 departed. Upon the acceptance of the Independence Act by the Philippine Legislature May 1, 1934, immigration into continental United States from the islands was restricted to a quota of 50 annually. Living births in the Philippines numbered 459,682 in 1933; deaths, 227,594.

Education. Primary education is free, secular, and coeducational. A total of 1,173,735 pupils, or 35 per cent of those of school age, were enrolled in 7671 public elementary schools in 1933-34; there were 26,957 teachers (188 Americans and 26,769 Filipinos). For public, vocational, secondary, and higher education, there were 242 special schools of various kinds and the University of the Philippines at Manila, with 5600 students in 1934-35. Private schools in 1934-35 numbered 404, with 90,866 pupils.

Production. Agriculture is the basic industry. Out of 39,657,000 acres of land suitable for farming, 10,421,696 acres were under cultivation in 1933. The value of agricultural production (1933) was about \$142,345,310. Sugar is the main crop, constituting 61 per cent of the value of all exports in 1933 and providing 30 per cent of the national income, 40 per cent of the Manila Railroad freight revenue, and 60 per cent of the government revenue. Banks made 47 per cent of their loans on sugar and 15 per cent of the population was dependent upon the industry. Sugar production in 1934-35 was 760,000 metric tons (1,430,000 in 1933-34); copra (1934 exports), 351,000 metric tons (308,750 in 1933); abaca (Manila hemp), 1,423,490 bales in 1934 (1,220,650 in 1933); tobacco (1933-34), 41,800 metric tons. Rice, corn, maguey, rubber, bananas, and other fruits are also grown. Rubber exports in 1934 were 450 long tons (245 in 1933).

Fishing, lumbering, mining, and manufacturing are important. Gold production showed a rapid increase after 1928, reaching 10,350 kilograms, valued at about \$11,850,000, in 1934. Iron and chromite deposits were opened up in 1935, the first shipment of iron ore to Japan being made in January and the first shipment of chromite ore to the United States following in October. Small quantities of coal, cement, salt, lime, etc., also are produced. The islands in 1934 had 45 sugar mills, 10 coconut oil factories, 6 desiccated coconut factories, 50 fibre grading plants, 85 cigar factories, 25 cigarette factories, 2294 rice mills, and 194 electric plants.

Overseas Trade. Total imports and exports for the calendar years 1929-35, and Philippine trade with the United States are shown in the accompanying table.

PHILIPPINE FOREIGN TRADE
[In thousands of dollars]

Year	Total imports	Imports from U. S.	Total exports	Exports to U. S.
1929	\$147,160	\$92,593	\$164,447	\$124,465
1930	123,093	78,183	133,167	105,342
1931	99,179	62,140	103,972	83,422
1932	79,395	51,298	95,338	82,648
1933	67,361	43,540	105,771	91,313
1934	83,607	54,376	110,404	91,844
1935	85,524	.....	94,245	.....

Exports of raw and refined sugar in 1934 totaled 1,134,626 long tons, valued at \$65,454,581; Manila hemp, 171,743 long tons, valued at \$8,661,568; copra, 337,291 long tons, valued at \$8,605,125; coconut-oil, 142,547 long tons, valued at \$6,794,871; cigars, 222,820,000, valued at \$3,605,510; desiccated coconut, 51,886,886 lb., valued at \$2,254,540; leaf tobacco, 28,943,356 lb., valued at \$1,391,046; cordage, 18,339,701 lb., valued at \$1,334,110. Exports of embroidery in 1934 were valued at \$2,666,420. The leading import items in 1934 were: Cotton cloth, \$21,108,000; iron and steel manufactures, \$15,135,000; mineral oils, \$12,447,000; other cotton manufactures, \$10,135,000;

machinery and parts, \$7,515,000; automobiles and trucks, \$6,022,000. The United States in 1934 purchased 84 per cent of the total Philippine exports, including practically all of the sugar shipments (87 per cent of the total in 1933). Japan, France, Great Britain, and China were the other chief export markets. Of the 1934 imports, the United States supplied 65.5 per cent (65 in 1933); Japan, 12.5 per cent (8 in 1933). Germany, China, and Great Britain, in the order named, were other sources of supply.

United States statistics for 1935 showed general imports from the Philippines of \$96,827,563 (\$87,811,089 in 1934) and exports to the Philippines of \$52,595,312 (\$47,128,516 in 1934).

Finance. Revenues of the insular government for the fiscal-calendar year 1934 amounted to \$39,337,376 (\$35,012,967 in 1933) and expenditures totaled \$35,359,795 (\$34,767,515 in 1933). The total current surplus (general, special, and bond funds) as of Dec. 31, 1934, was \$37,589,595, compared with \$33,612,014 on Dec. 31, 1933, the increase of \$3,977,581 representing the excess of income over expenditure for 1934. Budget estimates for 1936 called for expenditures of \$21,600,000.

The bonded indebtedness of the insular government on Dec. 31, 1934, was \$58,253,850 and that of the Provinces and municipalities \$9,168,850, or a total of \$67,422,700. Deducting from this total collateral bonds with a face value of \$6,698,850, issued against provincial and municipal bonds, and the cash and investments accumulated in various sinking funds, the resulting net balance of insular bonded indebtedness as of Dec. 31, 1934, was \$48,616,749. The unit of currency is the peso, with a value of 50 cents in U.S. money.

Communications. The opening of regular air-mail and passenger service between the United States and the Philippines in November, 1935, represented a major addition to the Philippines' communications system. On the first regular trans-pacific trip, one of the Pan American Airways Clipper planes left Alameda, Calif., on November 22 and arrived in Manila November 28, after stops at Hawaii, Midway and Wake Islands, and Guam. Shortly before the Philippine Legislature had granted a 20-year concession to the company. The opening of another line from Manila to Batavia, Netherland India, scheduled for February, 1936, would make Manila an important station on a complete airways network encircling the globe. New local air lines from Manila to Davao and from Manila to the gold mining centre of Camarines Norte were opened in 1935. There were 75 aeroplane landing fields at the end of 1934.

Railways in 1932 extended 986 miles, the chief system being the government-owned Manila Railroad (705 miles on Luzon). Railway carloadings declined 29 per cent in 1934 due to the falling off in sugar shipments. Radio telephone service was established with Japan in 1935. The 1934 high-way mileage was 9667 miles.

Government. For the Commonwealth Government established in 1935, see *History*; for the Territorial Government which it replaced see 1934 NEW INTERNATIONAL YEAR BOOK, p. 554. Governor General in 1935, Frank Murphy (assumed office June 15, 1933).

HISTORY

The Commonwealth Established. The Philippines took a great step towards their long-sought goal of complete independence when the Commonwealth government, authorized by the

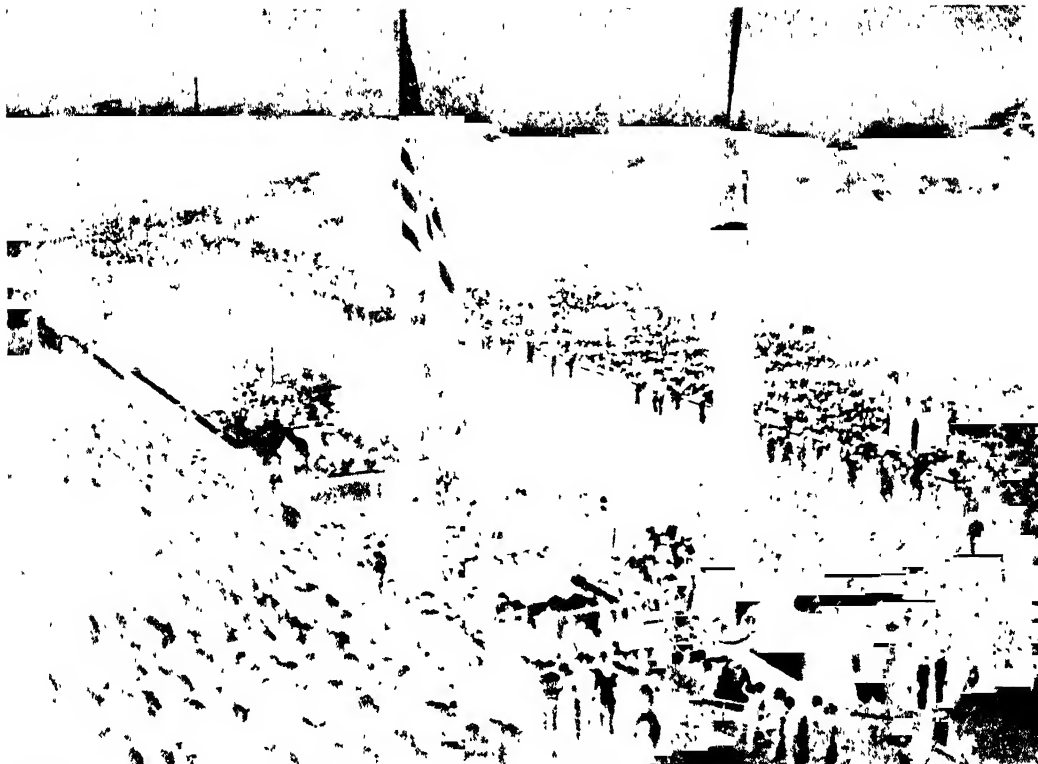
Tydings-McDuffie Act of 1934, was formally established on Nov. 15, 1935, with Manuel Quezon as its first President. The Islands then embarked upon a 10-year transition period of controlled autonomy, to be followed by complete independence on July 4, 1946.

The Constitution of the Commonwealth was framed by a Constitutional Convention, which convened in Manila July 30, 1934, and completed its task on Feb. 8, 1935. A committee of members of the convention then went to the United States to present the new fundamental law to President Roosevelt. He approved the document on March 23, as conforming substantially to the provisions of the Tydings-McDuffie Act. After certification by the President, the Constitution was then submitted to the voters of the Islands at a plebiscite held May 14. They approved it with an overwhelming majority—1,213,046 for ratification and 44,963 against.

Elections to choose a President, Vice President, and a National Assembly of 98 members, as provided in the new Constitution, were called for September 17. Backed by a coalition of their respective Nationalist-Democratic and National Pro-Independence parties, Manuel Quezon and Sergio Osmena were elected President and Vice President, respectively, and obtained a large majority of seats in the National Assembly. The vote for President was: Quezon, 695,332; Gen Emilio Aguinaldo, Nationalist, 179,349; Bishop Gregorio Aglipay, Republican and head of the independent Philippines Catholic Church, 148,010. Mr. Quezon stood for full acceptance of the Tydings-McDuffie Act and promised to follow the precedents set by successive American Governor Generals in administering the office of President. The opposing candidates both demanded immediate independence. The vote for Vice President was: Osmena, 812,352; Raymundo Melliza, Nationalist, 70,889; Norberto Nabong, Republican, 51,433.

The stage was now set for the establishment of the Commonwealth. At the invitation of the Philippine Government 17 United States Senators and 26 Representatives, headed by Vice President John N. Garner and Speaker Joseph W. Byrns, journeyed to Manila for the inauguration ceremonies. Secretary of War George H. Dern, numerous other functionaries, and about 35 newspaper editors from the United States were also guests of the Island Government. The impressive ceremonies in Manila on November 15 attending the swearing in of Mr. Quezon as President were attended by nearly a quarter of a million people. Almost simultaneously with the inauguration ceremonies a proclamation certifying the freedom of the Islands and the election of the officials chosen on September 17 was signed by President Roosevelt in Washington (the signing took place November 14 due to a difference of 13 hours in time between Washington and Manila). The proclamation was then read by Secretary of War Dern to the assembled multitude in Manila. At the same time Frank Murphy, the former Governor General, assumed the new office of United States High Commissioner to the Philippine Commonwealth.

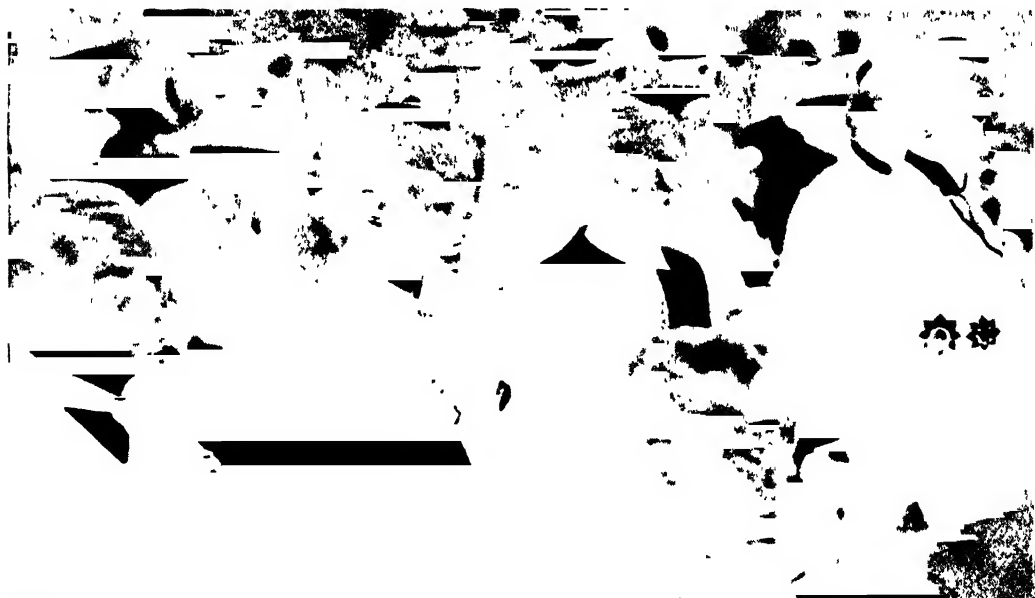
The Constitution. The new Constitution vested most of the executive powers formerly exercised by the Governor General in a President elected for six years by popular vote and ineligible for reelection. Legislative power rested with a unicameral legislature (National Assembly) of 98 members, also chosen by popular vote. The suffrage, however, was restricted to literate male



Hide Hoid

THE INAUGURAL CEREMONY

Throng of 500,000 persons assembled in front of the Legislature building at Manila to witness the launching of an autonomous Philippine Government



Acme

QUEZON TAKES THE OATH AS PRESIDENT

Vice-President John N. Garner, High Commissioner Frank Murphy, and Secretary of War George Dern (left to right) are shown representing the United States, as Manuel Quezon (right) was sworn in as Chief Executive, Nov. 15, 1935

THE PHILIPPINE COMMONWEALTH



ANANDA MAHIDOL
King of Siam, proclaimed Mar 2, 1935



Courtesy of Chinese Consulate General
GEN CHIANG KAI-SHEK
Chairman of Executive Yuan (Premier) of Chinese Nationalist Government, appointed Dec 7, 1935



THE MARQUESS OF LINLITHGOW
Viceroy of India, appointed August, 1935



Acme
MICHAEL J SAVAGE
Prime Minister of New Zealand, appointed Dec. 5, 1935

ASIA AND AUSTRALASIA

citizens having certain residence qualifications. All other elements of the government, including the Supreme Court of the Islands, were reconstituted under the Constitution, or laws enacted pursuant thereto. The natural resources of the Islands are declared property of the state and their exploitation was restricted to Philippine citizens or to corporations or associations in which citizens owned at least 60 per cent of the capital. Subject to existing rights, the National Assembly was authorized to determine the size of agricultural holdings.

While the Independence Act and the Constitution of the Philippines greatly broadened the Islands' autonomous powers, they reserved to the United States the control of defense and foreign relations, supervision over important phases of finance, and the right to intervene to preserve the Commonwealth government, to protect life, property, and individual liberty, and "for the discharge of government obligations under and in accordance with the provisions of the Constitution." During the ten-year transitional period, all Philippine officials were required to take an oath of allegiance to the United States; United States Government property was made exempt from taxation; the American Congress was empowered to limit the amount of the Philippine public debt; and no foreign loan might be contracted without Washington's approval. Moreover the American President was authorized to veto any Philippine law or executive order which, in his judgment, disregarded the Philippine Commonwealth's contracts or violated international obligations of the United States.

Appeals from decisions of Philippine courts might be carried to the United States Supreme Court; the Philippine President was required to report annually to the American President and Congress on the condition of the Commonwealth; and American citizens retained equal rights with Philippine citizens, although citizens of the Islands were considered foreigners in the United States and their entrance restricted under the quota system. Similarly, the exports of the United States were to be admitted free of duty into the Philippines for the ten-year period but Philippine exports, 84 per cent of which were shipped to the United States in 1934, were to be progressively barred by the gradual increase in tariff rates.

Problems of the Commonwealth. The disastrous economic dislocation threatened by the progressive exclusion of Philippine products from the American market was the most pressing of the several serious problems which beset the new Commonwealth. An American-Philippine reciprocal trade conference to discuss this problem was scheduled for early in 1936. Meanwhile the Island Government had organized an economic planning board to study proposals for making the Philippines less dependent upon the American market. The production of new raw materials for export and to serve as a base for new domestic manufacturing industries was investigated.

The other chief problems were the maintenance of internal order and the preservation of Philippine independence in the face of the rapidly expanding Japanese empire. The first of these dangers was emphasized by a serious armed uprising of the radical Sakdalists which broke out on May 2 and 3 in advance of the plebiscite of May 14. Simultaneous risings occurred at various points in the Provinces of Bulacan, Rizal, Cavite, and Laguna, the object being to occupy Manila and other cities,

repudiate the new Constitution, declare immediate independence, and establish a semi-socialistic régime. The movement was crushed by the Philippine Constabulary without the aid of United States troops, but only after rather severe fighting in which four members of the constabulary were killed and 10 wounded. The Sakdalists had 56 killed and 69 wounded. More than 1100 arrests followed but about 736 prisoners were subsequently released. By the middle of September 94 persons, including two Sakdal representatives in the Legislature, had been convicted of attempting to overthrow the government, 19 had been acquitted, and 272 were still awaiting trial.

The crushing of this revolt did not allay unrest, which was stirred up constantly by the vigorous propaganda of General Aguinaldo and other foes of the Quezon-Osmena government. Hunger and want in certain provinces produced mob attacks on rice warehouses, an Assemblyman-elect was assassinated by political foes, and a growth of banditry was reported. General Aguinaldo demanded an investigation into alleged government fraud and intimidation in the election of September 17, a request which Governor General Murphy refused. Shortly afterwards Philippine constabulary officers reported the discovery of a Sakdalist plot to seize the Governor General in connection with a coup against the Insular Government. Confirming predictions of a conflict between the Christian Filipinos and Moslem Moros upon the withdrawal of United States sovereignty, the Mohammedan Students' Association of Mindanao and Sulu on December 26 petitioned President Quezon to grant autonomy to those islands.

The seriousness of the problem was indicated by the fact that President Quezon devoted a third of his inaugural address on November 15 to a warning that attempts at rebellion and disorder would be vigorously crushed. Foreseeing difficult times ahead, Mr. Quezon in the summer of 1935 had asked the War Department at Washington to assign Gen. Douglas MacArthur to develop a national defense system for the Islands in preparation for their eventual independence. General MacArthur's appointment was announced the day after Mr. Quezon's election as President. Accompanied by a small staff of American army officers, General MacArthur left Washington shortly afterwards for Manila. In line with plans drafted by the General, the National Assembly on December 14 approved the Philippine National Defense Act, establishing a system of compulsory military training and providing for the mobilization of all Philippine citizens and resources in wartime. The sum of \$8,000,000 was appropriated for military purposes, including the customary \$3,500,000 for the Commonwealth constabulary and \$1,700,000 for military equipment. The Defense Act fixed the size of the Philippine army at 19,000, including 3500 to be used as police; provided for the military training of youths beginning at the age of 10; and envisaged a trained reserve of 500,000 men by 1945. The annual cost was estimated at 16,000,000 pesos, or about 25 per cent of the total budget.

A situation which seemed replete with possibilities of future embroilment with Japan had already developed in Davao Province on the Island of Mindanao. There a Japanese colony variously estimated at from 13,000 to 25,000 had over a period of years established profitable and successful agricultural colonies in a virtual wilderness won at the cost of much hardship and the loss of some

2000 Japanese killed by wild tribesmen. Controlling some 126,000 acres, devoted principally to hemp, and with an investment representing from \$10,000,000 to \$25,000,000, the Davao colony was engaged in a controversy with Philippine officials as to the legality of the leases to about 65,000 acres. Wholesale cancellation of these leases was urged by some Filipino leaders, while others suggested the outright purchase of all Japanese interests in Davao to avoid inevitable friction with the Tokyo government.

These ominous domestic and foreign dangers led conservatives in the Islands, including both business men and political leaders, increasingly to question the desirability of complete independence. On December 10 Roy W. Howard, chairman of the board of the powerful Scripps-Howard newspaper chain in the United States, brought this discussion into the open by issuing a statement in Manila in which he urged that the Commonwealth form of government be made permanent, with the United States retaining its sovereignty over the Islands. He said that such a policy was in line with "a consensus of opinion gathered during the past month from scores of leaders in business, finance, education, journalism, and politics." "The security of liberties already achieved, rather than national independence, has become the major political objective," he asserted, attributing the change to the "dark shadow" cast across the Philippines by an armed and aggressive Japan. It was generally believed that the statement was issued with the approval of President Quezon, with whom Mr. Howard had just completed a boat tour of the southern islands.

Meanwhile the steady replacement of United States cotton goods in the Philippine market by cheaper Japanese products was checked by an American-Japanese agreement concluded on October 12 without the participation of the Insular Government. Japan agreed to restrict her exports of cotton piece goods to the Islands to 45,000,000 square meters annually.

Legislation. Measures passing the American Congress during 1935 which affected the Philippines included an amendment to the Independence Act increasing the amount of duty-free cordage that might enter the United States annually from the Islands from 3,000,000 to 6,000,000 lb.; a law levying a processing tax of 1 cent per pound on rice, effective Apr. 1, 1935, to July 31, 1936; and an act providing for the return to the Islands at the expense of the United States Government of unemployed Filipinos in the United States who applied for transportation to their homeland.

The Insular Legislature held two special sessions during 1935—one on April 8-10 to fix the date of the Commonwealth election and to provide for the submission of the new Constitution to the voters, and the second on June 12 to canvass the return of the plebiscite of May 14. The regular session convened on June 24 and recessed on July 18 to September 23, after passing an appropriation act and a public works bill.

Consult Grayson L. Kirk, "Whither the Philippines," *Current History*, November, 1935.

PHILLIPS UNIVERSITY. A coeducational institution of higher learning at University Station, Enid, Okla., founded in 1907. The enrollment for the autumn of 1935 in all departments was 635. The attendance at the 1935 summer session was 219. The faculty numbered 32. The productive endowment amounted to \$643,554. The income for the year was \$96,230. The library contained 23,183 volumes, ex-

clusive of public documents. President, Isaac Newton McCash, D.D., LL.D.

PHILOLOGY, CLASSICAL. The best way to gain a fair conception of the more important contributions to classical philology is to examine lists of articles, books, reviews, or abstracts of them, or both, given in certain periodicals—*The American Historical Review*, *The American Journal of Philology*, *Antiquity*, *The Classical Journal*, *Classical Philology*, *The Classical Quarterly*, *The Classical Review*, *The Classical Weekly*, *Language* (the organ of the Linguistic Society of America), *Speculum* (the organ of The Mediaeval Academy of America), *History*, *Athenaeum* (published at Pavia, Italy), *The Journal of Hellenic Studies*, *The Journal of Roman Studies*, *Rivista di Filologia Classica*, *L'Antiquité Classique* (this replaces *Le Musée Belge*), *Mnemossyne*, *Philologische Wochenschrift*, *Gnomon*, and *Revue de Philologie*.

In addition to the periodicals listed above may be named certain monographs that appear with a fair degree of regularity. Especially valuable is *Bibliotheca Philologica Classica*, *Beiblatt zum Jahresbericht über die Fortschritte der Klassischen Altertumswissenschaft*, whose aim is to cover all publications, both articles and books (except such as are definitely pedagogical in character), in the whole field of classical philology. No attempt is made, however, to indicate the relative importance of the items listed.

In France a work of like value is published under the title *L'Année Philologique et Analytique de l'Antiquité*.

The Year's Work in Classical Studies, published in England, lists material that appears between July 1 and June 30, under such captions as "Greek Literature," "Latin Literature," "Greek History," "Roman History," "Greek and Roman Religion," "Ancient Philosophy," "Greek Archaeology and Excavation," "Italian Archaeology and Excavation," "Papyri," and "Roman Britain."

To *The Loeb Classical Library* (see *YEAR BOOKS*, 1911-34), additions were made, on the Greek side, of versions of Aristotle, *Athenian Constitution*, *Eudemian Ethics*, *Vices and Virtues*, H. Rackham; Aristotle, *Metaphysics*, *Books x-xv*, *Oeconomica*, and *Magna Moralia*, H. Tredennick and G. C. Armstrong; Aristotle, *On the Soul*, *Parva Naturalia*, *On Breath*, W. S. Hett; Demosthenes, *Meidias*, *Androtion*, *Aristocrates*, *Timocrates*, *Aristogiton*, J. H. Vince; Pausanias, Vols. iv and v, W. H. S. Jones (the concluding volumes. Vol. iv completes the translation; vol. v, compiled by R. E. Wycherley, consists of maps, plans, illustrations, and descriptive matter, and a full index to vols. i-iv); Plato, *Republic*, second and concluding volume, P. Shorey; Philo, the sixth of nine volumes, F. H. Colson; and Sextus Empiricus, vol. ii, R. G. Bury. On the Latin side there were added versions of Celsus, *De Medicina*, the first of two volumes, W. G. Spencer; Cicero, *The Verrine Orations*, the second of two volumes, L. H. G. Greenwood; Livy, vol. ix, covering Books xxxi-xxxiv, E. T. Sage; Livy, vol. x, covering Books xxxv-xxxvii, E. T. Sage; Procopius, *History of the Wars*, vol. vi, H. B. Dewing; and *Remains of Old Latin*, the first of three volumes, E. H. Warmington (this volume gives translations of the fragments of Ennius and Caecilius).

During the year progress was made on several lexicographical projects of the very highest importance. Of the tenth edition of Liddell and Scott, *A Greek-English Lexicon*, the eighth of the 10

parts was published; the Lexicon has been carried well into the letter Sigma; 1600 pages have now been issued. Of the *Thesaurus Linguae Latinae* the first two fascicles of vol. vii appeared: these covered *i-ico*, *ico-ignatus*. Fascicle 5 of vol. v, part 2, also appeared; this covered *eo-erogo*. Of A. Walde, *Lateinisches Etymologisches Wörterbuch*, 3d ed., by J. B. Hofmann, part 8, pages 561-640, *fulmen-hercium*, was issued.

Many years ago G. N. Olcott, then a professor at Columbia University, began, single-handed, the publication of *Thesaurus Linguae Latinae Epigraphicae*. After 22 fascicles, consisting of 520 pages, and covering *A—Asturia* had appeared, the work was cut short by the death of Professor Olcott. The work has been resumed, by L. F. Smith, J. H. McLean, and C. W. Keyes. In 1935, two parts, 48 pages, covering *Asturica—Augur* were published. These count as fascicles 1 and 2 of vol. ii.

In *The American Journal of Philology*, lvii, appeared "New Light on the Classical Scholarship of Thomas Gray," L. Van Hook; "Modal Uses in Chariton," W. S. Blake; "Presuppositions in Aristotle's Physics," G. Boaz; "On Certain Mathematical Terms in Aristotle's Logic," B. Einarsson; "Foreshadowing and Suspense in the *Posthomeric* of Quintus of Smyrna," G. E. Duckworth; "Discovery of the Minor Works of Tacitus," C. W. Mendell; "Place Names and Heroes in the *Aeneid*," Louise Adams Holland; "Critical Notes: Seneca's *Dialogi* VII-XII," W. H. Alexander; "The Date and Nature of the *Lex Thoria*," E. F. D'Arms; "Julia Berenice," Grace H. Maccurdy; "Early Ionian Writing," R. Carpenter; "Catiline, Crassus, and Caesar," E. T. Salmon; "Some Details of the Athenian Constitution," B. D. Meritt; "The Financial Crisis of 33 A.D.," T. Frank; "Inscriptions of Colophon," B. D. Meritt.

In *Classical Philology*, xxx, appeared "A New Dating of Horace's *De Arte Poetica*," J. Elmore (the author would put the writing of this treatise in 28-27 B.C.; other scholars have suggested 20, 15, or even 8 B.C. as the date); "Rome's Battles with Etruscans and Gauls in 284-282 B.C.," E. T. Salmon; "The Place of the Dog in Superstition as Revealed in Latin Literature," E. E. Burris; "The Development of Plautus' Art," J. N. Hough; "Wayfaring Signs," E. S. McCartney (this is a discussion of signs the wayfarer encounters, from meeting quadrupeds, from meeting snakes, from meeting birds, etc., that will show him whether good or evil is to be his portion); "Utopian Sources in Herodotus," M. Hadas; "Four Private Letters from the Columbia Papyri," C. W. Keyes; "On the Plot of Menander's *Dyscolus*," R. A. Pack; "Was Greece Free Between 196 and 146 B.C.?", J. A. O. Larsen; "The Art of Formula in Homer," G. M. Calhoun; "The Structure of the *Miles Gloriosus*," G. E. Duckworth; "The Origin and Meaning of the Term 'Uncial,'" W. H. P. Hatch; "Catullan Echoes in the *Odes* of Horace," C. W. Mendell; "Scrutiny and Appeal in Athenian Citizenship," A. Diller; "Ἐμπόρος, Ναύκληρος, and Κάπηλος: A Prolegomena to the Study of Athenian Trade," M. I. Finkelstein.

In *The Classical Journal*, xxx-xxxi, the following articles appeared: "The Wit's Progress—A Study in the Life of Cicero," H. Bennett; "Cicero's Tusculan Villa," G. McCracken; "Unwritten and Lost Epics of the Augustan Poets," T. W. Dickson; "The Development of Historiography Among the Romans," Marion Dittman; "Cicero and Mod-

ern Politics," B. L. Ullman; "Comments on Vergil's *Aeneid*," T. Frank; "The Jacob's Ladder in Homer," R. T. Stephenson (this is a study of the "concrete pictures" presented by Homer "of co-operation between God and man. . ."); "Claudian and the *Pervigilium Veneris*," Gladys Martin; "Lucretius and *The Testament of Beauty*," H. C. Lipscomb; "Horace as an Occasional Poet," L. E. Lord; "Horace's Definition of Poetry," T. Frank; "Aeolian Strains on the Roman Lyre," Cornelia C. Coulter.

In *The Classical Weekly*, xxviii, xxix, were published "Some American Estimates of Horace," J. P. Pritchard; "Religious Gleanings from the Magical Papyri," E. Riess; "Some Epicureans at Rome," C. M. Hall; "The Stoic Creed on the Origin of Kingship and of Laws," A. M. Young; "Thucydides I. 27.1," F. C. Babbitt; "A Study of Dramatic Technique as a Means of Appreciating the Originality of Terence," P. W. Harsh; "Excavations on the Site of the Ancient Town of Alesia," G. H. Allen; "Vergil, The Lord of Language," G. B. Beach; "The Trend of Euripidean Criticism," H. E. Mierow; "Un-Hellenic Elements in the Subject Matter of the *Dionysiaca* of Nonnus," L. R. Lind; "In Roman Egypt," Ethel H. Brewster (a study of a certain Tryphon, a weaver); "The Technique of Emotional Appeal in Cicero's Judicial Speeches," H. J. Leon; "Hawthorne's Debt to Classical Literary Criticism," J. P. Pritchard; "Seneca's Appearance," H. W. Kamp; "George Grote and His History of Greece," T. B. Jones.

In *Transactions and Proceedings of the American Philological Association*, lxxv, which gives the papers read at the meeting of the Association held in December, 1934, one finds the following papers: "Spirit and Plan of the *Pervigilium Veneris*," E. K. Rand; "Menander in Current Criticism," L. A. Post; "A New Indirect Tradition for the Text of Valerius Maximus," Dorothy Schullian; "The *Ἀμυρία* of Achilles," S. E. Bassett; "A Problem of Authenticity," G. M. Calhoun (a protest against the prevailing tendency to regard Demosthenes, Oratio 29, as not the work of the great orator); "The Hippocratic Patient and His Physician," H. N. Couch; "The Position of the Parabasis in the Plays of Aristophanes," P. W. Harsh; "Roman Landholding in Asia Minor," T. R. S. Broughton; "Cicero in *Catilinam* 1, 19—Catiline's Attempt to Place Himself in *Libera Custodia*," W. E. Gwatkin, Jr.; "The Evidence for the Teaching of Socrates," E. R. Havelock.

In England two classical periodicals are especially well known—*The Classical Quarterly* and *The Classical Review*. In *The Classical Quarterly*, xxix, appeared "The Later Greek Comic Chorus," K. J. Maidment; "Aeschylus *Agamemnon* 1223-38 and Treacherous Monsters," A. Y. Campbell; "Terentiana," J. D. Craig; "Notes on the Fifth Idyll of Theocritus," A. S. F. Gow; "Notes on Herodotus," J. E. Powell; "Simonides Fr. 13 Diehl," J. A. Davison; "The Pseudo-Platonic Dialogue *Eryxias*," D. E. Eichholz; "Notes on Three Passages from the Nicomachean Ethics, Book VIII," G. Percival; "The Comic Fragments in Their Relation to the Structure of Old Attic Comedy," M. Whittaker.

There remains only space to mention a very few of the books that have come to hand:

Atkins, J. W. H., *Literary Criticism in Antiquity*; Bailey, C., *Religion in Antiquity*; Bailey, C., *Religion in Virgil*; Baldston, J. P. V. D., *The Emperor Gaius (=Caligula)*; Baker, G. P., *Twelve*

Centuries of Rome; Baxter, J. H., and Johnson, Charles, *Medieval Latin Word-List from British and Irish Sources*; Butler, H. E., *The Fourth Book of Virgil's Aeneid*; Glover, T. R., *The Ancient World*; Griffith, G. T., *The Mercenaries of the Greek World*; Guthrie, W. H., *Orpheus and Greek Religion*; Hadszits, G. D., *Lucretius and His Influence*; Hutton, James, *The Greek Anthology in Italy to the Year 1800*.

Kappelmacher, A., and Schuster, M., *Die Literatur der Römer bis zur Karolingerzeit*; Livingstone, R. W., *Greek Ideals and Modern Life*; Marsh, F. B., *A History of the Roman World from 146 to 30 B.C.*; Morrow, G. R., *Studies in the Platonic Epistles, With a Translation and Notes*; Oldfather, W. A., Canter, H. V., and Perry, B. E., *Index Apuleianus*; Parker, H. M. D., *A History of the Roman World From A.D. 138 to 337*; Pease, A. S., *Publi Vergili Maronis Aeneidos Liber Quartus*.

Richards, G. C., *Cicero: The Fall of a Republic*; Rose, J. H., *The Mediterranean in the Ancient World*, 2d ed.; Scullard, H. H., *A History of the Roman World 753 to 146 B.C.*; Showerman, G., *Monuments and Men of Ancient Rome*; Sinclair, T. A., *A History of Classical Greek Literature from Homer to Aristotle*; Spicer, E. E., *Aristotle's Conception of the Soul*; Stobart, J. C., *The Glory That Was Greece*, and *The Grandeur That Was Rome* (these are revised editions, by F. N. Pryce); Tozer, H. T., *History of Ancient Geography, Second Edition, With Additional Notes by M. Cary*; West, L., *Roman Gaul: The Objects of Trade*; Westlake, H. D., *Thessaly in the Fourth Century B.C.*

PHILOLOGY, MODERN. The French Academy celebrated with much pomp and ceremony its tercentenary during the summer and, as a sort of culmination of its "glorious" achievements, completed on Sept. 5, 1935, the long-heralded eighth edition of its Dictionary of the French Language, after having worked on it since Nov. 5, 1885, or lacking just two months of fifty years. This Dictionary is, as is well known, the authoritative conservative-lexicon of the language, for the Academy, at its weekly meetings, has discussed with the utmost care and circumspection every word that has made a bid for its consideration and has examined thoroughly all of its claims of being included among the aristocrats of linguistics. It is true that there are no lexicographers or grammarians in the Academy—unless Abel Hermant, author of an unimportant grammar of popular French speech, may be dignified with such a title—but little difference does that make to the august self-appointed arbiters of vocabulary and usage! This fascism of speech is not, however, one of the many mushrooms of modern Europe, but goes back three centuries to a really great exponent of that doctrine, Cardinal Richelieu.

When the Academy was founded by the Cardinal on Mar. 13, 1634, it had no definite aim or purpose. Consequently, its first meetings consisted of lectures and verbose orations on a great variety of irrelevant subjects. Chapelain inveighed, for example, against love (*Contre l'Amour*), while Racan thundered against science (*Contre les Sciences*), and Gombaud, not to be outdone, took for the subject of his discourse, the *je ne sais quoi*. All of which so exasperated Richelieu, who said he had expected something better of "ces Messieurs," that he ordered them to "meddle with nothing but the embellishment and improvement of the French language." This proved to be a very

happy edict, since the Academicians were anything but pleased with the fact that, while they were indulging in empty words, the women of the salons of Mme de Rambouillet, Mlle de Scudéry and others had, unostentatiously, but firmly, established themselves as the directors of the language. Taking advantage of this glorious opportunity to reassert the rights of males, the Academy then began to devote its weekly meetings to discussions and criticisms of the works of its members in order to draw therefrom rules for the use of words, and set for its goal the preparation of a grammar and a dictionary. It required almost three centuries to produce the grammar, and when it finally appeared in 1933, under the editorship of the novelist, Abel Hermant, the poet, Paul Valéry, and the medievalist, Joseph Bédier—not one of whom could be called a "grammairien" in the strict philological meaning of the term—it met with an onslaught of devastating criticism at the hands of that prince of historical grammarians, Dean Ferdinand Brunot of the University of Paris, who, of course, was not a member of the Academy.

The Dictionary, on the other hand, was first planned by a pretentious poet, Jean Chapelain (1595–1674), with the counsel of the famous "greffier de l'usage," Claude Favre de Vaugelas (1585–1650), who wrote the widely known *Remarques sur la Langue française* (1647) not only to serve as a guide for the Academicians in their literary work, but also in order to clean the language of its filth (*pour la nettoyer des ordures qu'elle avait contractées*). Chapelain, of course, knew next to nothing of lexicography, and, as for Vaugelas, he himself admitted that he was neither a grammarian nor a lexicographer, for his sole aim was to note down the idioms that he heard every day (*rapporter les locutions qu'il entendait chaque jour*). In fact, the only real lexicographer in the *fauteuils* of the Academy in the 17th century was Antoine Furetière (1620–88), who, as was to be expected, did not approve of the methods adopted by the Venerable Company and set about preparing a *Dictionnaire* of his own, which, unfortunately, was only published two years after his death. Jealous, however, of the success with which he was carrying on his work, the Academy expelled him most unjustly as a plagiarist, hoping thereby to save its face.

It was then in 1694—just 60 years after the first meeting of the Academy—that the first edition of the *Dictionnaire de l'Académie* appeared. Therein was urged the elimination of archaic words (*les vieux mots*), of neologisms (*mots nouvellement inventés*), and of angry and immodest words (*termes d'emportement et qui blessent la pudeur*). This Dictionary, which may be called aristocratic and affected (*précieux*), aimed to make the language gain in dignity and precision, but, at the same time, impoverished it by dropping its picturesque and forceful elements. It was only in its fourth edition (1762) that the "language of the people" as well as a few words taken from the "arts and sciences" were deemed worthy of serious consideration. Hence, it is impossible to get any definite idea of the real status of the language at any given period from the lexicon of the Academy.

In the subsequent six editions, issued in 1718, 1740, 1762, 1798, 1835, and 1878, the last word is *sut*, defined as "a familiar interjection to send people to the devil." In the present (1935) edition, however, the Academicians thought they were making a startling innovation by adding the word *zygomatique*, without realizing that it has long

been current not only in French but even in English. To the Librarian of the Institut, Jean Longnon, has been entrusted the preparation of the new edition for the press; and it is expected that it will appear in 1936 or 1937 at the latest. Impressed, no doubt, by the celebrated *Remarques* of F. Brunot on the Academy's Grammar mentioned above, Marcel Prévost, the novelist, hastened to publish in *Gringoire* (September 13) a defense of the Dictionary, in which he calls attention to his article on the same subject in *Trois Siècles de l'Académie française, par les Quarante*, issued last summer in commemoration of the tercentenary.

Since the first alphabetical letters of this eighth edition were completed back in the 1880's and 1890's, it is not exaggerating to say that the work itself, though not yet published, is already completely out of date. This is due to the absurd procedure of allowing 40 uninterested dilettantes decide arbitrarily, in casual conversation, what words were to be admitted into its columns. How much better it would have been for the Academy to have devoted a part of its enormous funds to the employment of experts who might have completed the work in a few years and, thus, have given us a definite picture of the actual state of the language during one decade or less! The fact that Harrap followed this method explains the anomaly that the most complete dictionary of modern French that has yet appeared has been produced, not in France, but in England.

Furthermore, it is well known that, during the past 40 years, the vocabulary of every European language has undergone greater transformation than in any two hundred years previous thereto. Granting, then, that the Academy definitely excludes from its lexicon all very technical terms, there is, nevertheless, an extensive list of words pertaining not only to science but also to the automobile, cinema, aviation, radio, etc., which have passed into common use. In addition, there are a number of homely locutions, such as *Qu'est-ce que c'est que ça?*—which, because of its ungrammatical character, was once vigorously condemned by both the poet, Victor Hugo, and the great lexicographer, Littré—that can no longer be frowned upon by purists.

If, on the other hand, we consider pronunciation, we note, during this time, changes of equal importance. Thus, in the 1880's, the *ll* in *filles*, *meilleur*, etc., was sounded as *ly* and not *y* as today (Littré, for instance, says: "*flye*, incorrectly pronounced *fiye*"); the *au* in *mauvais* was pronounced like *ô* and not, as now, with the open *o* or, better, the mute *e* (*a*) sound; *femme* was not yet pronounced as *fam*; *fosse* had not yet acquired the long *ô*; the nasal *-on* was not so sharp, having still a slight *g* tinge at the end; etc. And a still more striking innovation may be seen in the introduction of the uvular *r*. The writer of these lines well remembers how, in 1903, the one young actor in the large troupe of the Comédie-Française who used this *r* was berated by critics for not following the example of his elders who rolled out the lingual *r* with such vigor that the very rafters of the auditorium trembled with emotion. And yet, some 10 years ago, the same spectator was astonished to note that the entire troupe was using the much-despised uvular *r*, even including Albert Lambert, fils, who was regarded as the expert manipulator of the lingual *r* some 20 years before.

During the post-War period French also felt the influence of various foreign languages,—especially English,—both in vocabulary and syntax.

Indeed, the phraseology of contemporaneous French novelists is so strikingly different from that of their pre-War brethren as to be almost uncomparable; and, as for the words they use, suffice it to say that very few of them can be found in the last authoritative dictionary of the language, the Hatzfeld-Darmesteter-Thomas *Dictionnaire général de la Langue française*, issued around the beginning of our century.

It should not, of course, be concluded from the above that French was the only language to undergo such transformations since the close of the last century, for it is self-evident that other languages have followed the same course. Thus, in English we have only to compare a present-day dictionary with one of the 1890's to note the vast difference in vocabulary and usage, as well as to consider the rapid development of the stress-accent in England; in Swedish, the gradual passing of the stress-accent into a musical or pitch accent; and in Danish the replacement of initial sonants by surds. As for Spanish, many of the South American tongues have gone so far astray from the mother-speech of Spain as to be at times quite incomprehensible to the Castilian. Thus, Argentinian, with its vast number of borrowings from Italian and with its pronunciation of *jo* for *yo*, *caje* for *calle*, *Irigojen* for *Irigoyen*, etc., is almost becoming a new language. And the Portuguese and the Brazilians now find it necessary to create special dictionaries of equivalents in order to understand one another. Finally, even Castilian Spanish, one of the most conservative tongues in the world, has joined the procession and has been evolving rapidly during the past quarter-century, both as regards vocabulary and pronunciation. In two visits to Madrid, made in 1904 and 1921, the present writer noted the following changes in pronunciation alone: The gradual replacement of what might be called the lisped *c* (surd or voiceless *th*) by the sibilant or surd *s* sound; the total disappearance of the *d* (pronounced formerly as sonant or voiced *th*) between vowels, as in *cansado*, *pescado*, etc.; the aspiration of *s* before a consonant, as in *mismo* (pron. *mihmo*), *los rios* (pron. *loh*), *Escorial* (pron. *Ehcucial*), etc.

All of this is a very healthy sign, showing that modern languages are living and dynamic and are repeating the same processes of growth which have characterized them from the earliest times.

General. G. K. Zipf's *The Psycho-Biology of Language* (Boston), sub-titled "An Introduction to Dynamic Philology," is an interesting attempt to apply statistical principles to objective speech-phenomena, "viewed as but a series of communicative gestures." W. W. Blanck's *General Principles of Language* (ib.) consists of a synthesis of principles common to the study of all languages. A. F. Bentley's *Behavior, Knowledge, Fact* (Bloomington, Ind.), considers linguistic phenomena as events in the behavioral field, as the functional activity of social men. C. Seeger's "Preface to All Linguistic Treatment of Music" is the title of a contribution to *Music Vanguard* (March-April). Col. J. Churchward's *Cosmic Forces as Taught in Mu* (vol. ii; Mount Vernon, N. Y.) is the fifth of his series of volumes dealing with the Lost Continent of Mu. J. E. Pomfret's *The Geographic Pattern of Mankind* (New York) traces the influence of geographical factors on the human race. Other works include H. Hirt, *Indogermanische Grammatik* (Teil VI, Syntax I; Heidelberg), dealing with case and verbal forms of the Indo-European; A. Meillet, *Introduction à l'Étude comparative des Langues indo-*

européennes (7th ed., Paris), a most valuable study; L. Bloomfield, *Language* (London), a British edition of a well-known American work; W. F. Twaddell, *On Defining the Phoneme* (Baltimore), a publication of the Linguistic Society of America; W. B. and E. C. Hunt, *Sixty Alphabets* (Milwaukee, Wis.), a revised and enlarged edition of the authors' typographical study, *Fifty Alphabets*; G. H. Vollins' *Words in the Making* (New York), a volume in the How-and-Why Series; and S. S. Smith, *The Command of Words* (ib.), explaining how to develop a wide vocabulary.

Dictionaries. "The best dictionaries," wisely remarks *John o' London's Weekly*, "are compiled for those who know a good deal about words, not for those who know little. They provide data on which educated readers can form decisions for themselves." Consequently, under this heading we shall attempt merely to list a few titles that will be of use to American readers. These include H. W. Horwill, *A Dictionary of Modern American Usage* (New York), which endeavors to point out the differences between the speech of the United States and that of England; Webster's *Elementary Dictionary* (ib.), a fourth, revised edition of this lexicon, intended for young people; *The Shorter Oxford English Dictionary* (2 vols., ib.), adapted from the 13-volume *Oxford English Dictionary*; *The Thorndike-Century Junior Dictionary* (Chicago), a school dictionary containing 25,000 words, with definitions adapted to the juvenile experience; C. O. S. Mawson, *Dictionary of Foreign Terms, Found in English and American Writings of Yesterday and Today* (New York), containing more than 10,000 words and phrases from more than 50 languages; Gov. J. G. Pollard, *A Connorary* (ib.), a third edition, revised and enlarged, of this collection of unofficial word-definitions, chiefly humorous; E. H. Thomas, *Chinook* (Portland, Ore.), a history and dictionary of the Northwest Coast trade jargon; and, though one may agree with the *London Fortnightly* when it says that "to make a dictionary of slang is like attempting to catalogue an ocean," mention may nevertheless be made of H. N. Rose, *A Thesaurus of Slang* (New York), now appearing in a revised and corrected edition. Other useful glossaries are W. J. Lewis, *The Language of Cricket* (ib.), containing a vocabulary of cricket terms of the past two centuries; *Mary Thomas's Dictionary of Embroidery Stitches* (ib.), with illustrated instructions for making 305 stitches; W. Longyear, *A Dictionary of Modern Type Faces and Lettering* (ib.), a reference glossary; J. O. Dahl, *Dictionary of 1,001 Menu Terms* (Stamford, Conn.); Alice Easton, *Dictionary of Sea Food* (ib.); W. Ames, *What Shall We Name the Baby?* (New York), giving the origins and meanings of 2500 first names; Helen R. Keller, *The Dictionary of Dates* (2 vols.; ib.), a valuable reference history of every country of the world by dates, which extends from the earliest times to the year 1930 and of which the first volume, devoted to the Old World, is based upon the *English Dictionary of Dates* that brought the record down to 1910; and L. A. Leslie and C. E. Funk, *25,000 Words, Spelled, Divided and Accented* (ib.), a guide to correct spelling and syllabication.

Aryans, Archaeology, and Folklore. On the prehistoric ancestors of the Indo-Europeans we have F. Howell, *Our Aryan Ancestors* (Boston), a history of the Aryan peoples; G. Poisson, *Les Aryens* (Paris); T. Fitzhugh, *Aryan Sacred Voice of Stress: Origin and Genesis of Speech* (Charlottesville, Va.), a study of early phonetics in the

Aryan speech; and Margaret Schlauch, *Who Are the Aryans?* (New York), a study of factors in race prejudice.

Useful studies on archaeology include S. Casson, *Progress of Archaeology* (New York), a round-the-world survey of modern archaeological discovery, giving particular attention to recent additions to archaeological knowledge and to the study of history made as a result of excavations during the last 20 years; *The Annual of the American Schools of Oriental Research* (vol. xiv for 1933-34; Philadelphia), a report of the past year's explorations and excavations in Eastern Palestine, edited by M. Burrows and E. A. Speiser; E. A. Speiser, *Excavations at Tepe Gawra* (vol. i; ib.), a record of some Mesopotamian archaeological excavations; W. F. Bade, *A Manual of Excavation in the Near East* (Berkeley, Calif.), a description of methods of digging and recording of the Tellen-Nasbeh Expedition in Palestine; and G. A. Reisner, *Tomb Development* (New York), a handbook for working archaeologists.

Mythology and folklore are studied in F. C. Bray, *The World of Myths: A Dictionary of Universal Mythology* (New York), a classified and indexed dictionary; S. Thompson, *Motif-Index of Folk-Literature* (vols. iii and iv; Bloomington, Ind.), a classification of narrative elements in folktales, fables, myths, etc.; P. Samtyves, *Corpus du Folklore préhistorique en France et dans les Colonies françaises* (Paris) and *Corpus du Folklore des Eaux en France et dans les Colonies françaises* (ib.); and J. N. Then, *Christmas* (Milwaukee, Wis.), customs and legends of the Christmastide from many nations.

African. The attention of the public the world over is again focused on Africa, not as in the past because its archaeological treasures furnished the key to modern civilization, but because it may, in the future, mark the end of that civilization to which it gave birth, as a consequence of the fierce economic struggles which European nations are carrying on within its borders. Hence, among works of interest dealing with that vast continent we may cite W. Fitzgerald, *Africa* (New York), a social, economic, and political geography of its major regions; L. Middleton, *The Rape of Africa* (ib.), supplying the political and diplomatic background in Europe of the international scramble for territory in Africa since 1877, when Stanley navigated the Congo; V. A. O'Rourke, *The Juristic Status of Egypt and the Sudan* (Baltimore); M. Vieuchange, *Smara: The Forbidden City* (ib.), a diary of the exploration of a city in the Spanish Sahara, translated from the French; E. F. Gautier, *Sahara, the Great Desert* (ib.), a study of the geography and life of the desert, translated from the French; D. Campbell, *Camels Through Libya* (Philadelphia), an account of an expedition from the fringes of the Sahara to the oases of Upper Egypt; G. G. Brown and A. M. B. Hutt, *Anthropology in Action* (New York), an experiment in applying anthropological knowledge to the administration of African tribes, published by the International Institute of African Languages and Cultures; G. Gorer, *African Dances* (ib.), the record of a journey through West Africa, made chiefly in order to study the native dances, which also contains a study of native life, government, religion, and customs; *Arts of West Africa* (ib.), a symposium of the graphic and plastic arts, edited by M. Sadler for the International Institute of African Languages and Cultures; G. Sinclair, *Loose Among Devils* (ib.), adventures on Devil's Island

and in the jungles of West Africa; W. D. Hambly, *Culture Areas of Nigeria* (Chicago), an anthropological survey of this region, published by the Field Museum of Natural History; F. G. Carnochan and H. C. Adamson, *The Empire of the Snakes* (New York), an extraordinary account of a secret cult in the African jungle, which is declared to be true; Ethel A. Aginsky, *A Grammar of the Mende Language* (Philadelphia), a study of the language of Sierra Leone, a British protectorate on the west coast of Africa, published by the Linguistic Society of America; Vivienne de Watteville, *Speak to the Earth* (New York), a story of a woman's five-months' trip alone in the wilds of East Africa; E. J. Yancy, *Historical Lights of Liberia's Yesterday and Today* (Xenia, Ohio), a history of Liberia during the past century; and *The Cambridge History of the British Empire, Vol. VIII, South Africa* (New York), a history of the British Empire in South Africa, edited by J. H. Rose, A. P. Newton, and E. A. Benians. Mussolini's colonial aspirations have, as was to be expected, made of the heretofore unknown Abyssinia or Ethiopia the cynosure of all eyes. Among the works devoted to this country are G. MacCreagh, *The Last of Free Africa* (New York), a second edition of a book, first published in 1928, dealing with the nation and people of Abyssinia; Elizabeth P. MacCallum, *Rivalries in Ethiopia* (ib.), a survey of the facts behind the present crisis; C. S. Coon, *Measuring Ethiopia and Flight into Arabia* (Boston), an anthropologist's experiences in Ethiopia; Maj. H. Darley, *Slaves and Ivory in Abyssinia* (New York), a record of exploration among the Ethiopian slave-raiders; L. Farago, *Abyssinia on the Eve* (ib.), a journalist's impressions of Ethiopia; C. F. Rey, *The Real Abyssinia* (Philadelphia), impressions of the country after a stay of 10 years; M. Griaule, *Burners of Men* (ib.), the experiences of a scientist in Ethiopia, translated from the French; M. Griaule, *Jeux et Divertissements abyssins* (Paris), an account of the games and social life of the Ethiopians; L. M. Nesbitt, *Hell-Hole of Creation* (New York), an account of an expedition into the Abyssinian Danakil; and *Abyssinia and Italy* (ib.), a survey of the dispute. Since readers are often puzzled as to whether the country should be called Abyssinia or Ethiopia, it may be remarked that Sir E. A. Wallis Budge states, in his *History of Ethiopia*, that the latter word comes from the Greek, meaning "land of the burnt-faced men," and that it was applied by early geographers and historians to various unexplored regions of Africa and Asia. Even until late into the 19th century "Ethiopia" continued to appear on maps as a vast region vaguely located in equatorial Africa, while Abyssinia was the name given to the heart of the country now officially known as Ethiopia. The natives prefer Ethiopia, since "Abyssinia" and "Habish" have for them a derogatory connotation, being, for some unknown reason, the equivalent of the English "mongrel" or "outcast." Dr. Richard Gottheil, Professor of Semitic Languages at Columbia University, points out, in the *New York Times* of November 2, that the word "Habish" or "Habash," from which Abyssinia is derived, is Arabic and comes from the Habishat tribe of Semites from the Yemen, in South Arabia, who settled in this plateau region many centuries before Christ. The Gallas, Somalis, Danakils, and other subject peoples of the lowlands are, according to the same authority, racially Hamitic and have a different culture. As for the language of Ethiopia, Dr. John P. Harrington, Ethnologist of the Smithsonian Institution, states, in *The Path-*

finder (October 12), that it is the most conservative of the Semitic languages "in that it has departed the least in its form from the original proto-Semitic," the prehistoric language spoken before 5000 B.C., whose "words are obtained by a comparative study of Hebrew, Syriac, Phœnician, Babylonian, Arabic, and Ethiopian." Ancient Ethiopian was spoken down to 1500 A.D., when it broke up into the modern dialects which yet remain "the most primitive Semitic languages." Thus, the pre-Semitic, as well as the Modern Ethiopian, term for "ox" is *alf*, which even in Biblical Hebrew had become *aalef*; the same is true of the word for "house," *beet*, in the former languages, which has become *beeth* in Biblical and Modern Hebrew. Besides being easy to pronounce and to learn, Ethiopian "is sonorous and is accented mostly on the next to the last syllable." Ethiopia being the oldest Christian country in the world, according to Dr. Harrington, "its literature is from the earliest times rich, consisting of Bible translations, prayer-books, liturgies, etc."

Chinese and Japanese. It is quite possible that, by reason of our unfortunate experience with Europe, the attention of the American people will be centred more and more hereafter in our own hemisphere as well as on the Pacific. Consequently, it behooves us to become better acquainted with the history and culture of the Chinese and Japanese peoples, with whom our contacts will no doubt grow in time. That our interest in these nations is rapidly developing may be seen in the steadily increasing output of works dealing with them. Thus, among the useful contributions relating to China, which appeared during the past year, we may note Mary A. Nourse, *The Four Hundred Million* (Indianapolis, Ind.), a short history of the Chinese; Anna L. Strong, *China's Millions* (New York), an analysis of political and social conditions in that country; W. Martin, *Understand the Chinese* (ib.), supplying aspects of modern China and her government; Lin Yutang, *My Country and My People* (ib.), in which a Chinese gives his views of Chinese civilization, its bases and modern phases; *The Sayings of Confucius* (ib.), a third, revised edition of the translation of L. A. Lyall; Sir Reginald F. Johnston, *Confucianism and Modern China* (ib.), a thorough study by an authority in the field; A. Waley, *The Way and Its Power* (Boston), a study of the Tao Tê Ching and its place in Chinese thought; *Mencius* (New York), a translation of the Chinese scholar's writings, with an introductory biographical sketch, by L. A. Lyall; W. E. Griffis, *China's Story in Myth, Legend and Annals* (Boston), a revised edition of a book first published in 1911, with additional chapters by A. Walworth; *Yen-Foh* (Chicago), a folk-tale translated and adapted from the Chinese by Ethel Eldridge; Bertha Metzger, *Picture Tales from the Chinese* (New York), folk-tales, not found elsewhere, told with freshness and charm; R. W. Clack, *From Bamboo Glade and Lotus Pool* (Atlanta, Ga.), selections from Chinese classical poetry, translated into English; Helen Waddell, *Lyrics from the Chinese* (New York), a new edition; L. C. Goodrich, *The Literary Inquisition of Ch'ien-Lung* (Baltimore, Md.), an excellent study of literary censorship in 18th-century China; Lucy Driscoll and Kenji Toda, *Chinese Calligraphy* (Chicago), an investigation into its symbolism, technique and development; D. Carter, *China Magnificent* (New York), a history of 5000 years of Chinese art; Kuo Hsi, *An Essay on Landscape Painting* (ib.), a translation of the precepts of an 11th-century

Chinese artist; Chao-Mei-Pa, *The Yellow Bell* (Baldwin, Md.), a historical sketch of Chinese music, translated from the French; and Mary B. Hollister, *South China Folk* (New York), containing intimate stories of Chinese home life.

On Japan we have S. L. Gulick, *Toward Understanding Japan* (New York), supplying sketches of American-Japanese relations; O. Tanin and E. Yohan, *Militarism and Fascism in Japan* (ib.), a study of the connection between these forces in contemporary Japan; Sir Charles Eliot, *Japanese Buddhism* (ib.), an account of its organization and development; *Buddha, Truth and Brotherhood* (Santa Barbara, Calif.), a summary of Buddhist scriptures, translated from the Japanese; J. W. T. Mason, *The Meaning of Shinto* (New York), a study of the religion of Japan; Lady Murasaki, *The Tale of Genji* (2 vols.; Boston), a new edition of this 11th-century novel, translated from the Japanese by A. Waley; *The Tourist Library* (3 vols.; ib.), containing Y. Fukukita, *The Tea Cult of Japan*, T. Nogami, *Japanese Noh Plays*, and M. Miyoushi, *Sakura, Japanese Cherry*; S. H. Wainwright, Jr., *Beauty in Japan* (New York), a study of the basic esthetics underlying Japanese life and culture; K. Toda, *Japanese Scroll Painting* (Chicago), a study of this field of Japanese art from the 8th to the 15th century, and its relation to national culture; and A. Priest, *Japanese Costume* (New York), a descriptive and historical sketch of No robes and Buddhist vestments on exhibition at the Metropolitan Museum of Art.

Mongolia, Manchoukuo, and Korea are studied in the following: H. Haslund, *Men and Gods in Mongolia* (New York), more adventures in Mongolia by the author of *Tents in Mongolia*; O. Latimore, *Manchuria, Cradle of Conflict* (ib.), a new edition of a well-known work; G. B. Rea, *The Case for Manchoukuo* (ib.), a presentation of its claims for foreign recognition; and F. S. Miller, *Our Korean Friends* (ib.), a missionary's account of contemporary life in Korea.

Indo-Iranian. The history, language and culture of India are studied in the following: Emma Hawkrige, *Indian Gods and Kings* (Boston), a history of India to the close of the period of the great moguls; K. F. Leidecker, *Sanskrit, Essentials of Grammar and Language* (New York), an excellent manual; W. S. Page, *An Introduction to Colloquial Bengali* (Cambridge, Eng.); *The Little Clay Cart, Attributed to King Shudraka* (New York), a play translated from the Sanskrit by A. W. Ryder and adapted by Agnes Morgan; A. K. Coomaraswamy, *Elements of Buddhist Iconography* (Cambridge, Mass.), a treatise on the symbols employed in Buddhist art; L. S. S. O'Malley, *Popular Hinduism* (New York), a survey of the beliefs and practices of the Indian masses; Dr. R. Mulbagaia, *Popular Practice of Yoga* (Philadelphia), a study of its theory and practice; N. Gangulee, *The Indian Peasant and His Environment* (New York), a sociological and economic investigation; M. L. Darling, *Wisdom and Waste in the Punjab Village* (ib.), giving the economic and social aspects of Indian village life; Katherine Mayo, *The Face of Mother India* (ib.), a history and portrayal of Indian life; and P. Brunton, *A Search in Secret India* (ib.), an account of a journalist's wanderings in the heart of India.

The following title on Tibetan may be mentioned here: *Tibetan Yoga and Secret Doctrines* (New York), the *Seven Books of Wisdom of the Great Path*, as translated into English by the late

Lama Kazi Dawa-Samdup, with introductions and notes by the editor, W. Y. Evans-Wentz.

Iranian or Persian is represented by Y. B. Mirza, *The Young Tentmaker* (Boston), a story of the boyhood of Omar Khayyám; C. H. Rempis, *Omar Chajjam und seine Vierzeiler* (New York), a study of his life and philosophy in German, with a translation of his quatrains from the oldest Persian version into German; *The Rubaiyat of Omar Khayyam* (ib.), being the first and fourth translations by Edward Fitzgerald, with an introduction by George Saintsbury; *The Rubaiyat of Omar Khayyam* (San Francisco, Calif.), paraphrased in 712 English rubia verses by H. B. Lister; S. Cobb, *Security for a Failing World* (Washington, D. C.), a description of the Bahá'i movement; and R. Afnan, *Mysticism and the Bahá'i Revelation* (New York), a study in contrasts, issued by the Bahá'i Publishing Committee.

Slavic. A rather curious fact to note is the steady decline of interest of Americans in Slavic studies during the past few years, notwithstanding the millions of people who speak these languages. Among the useful contributions of the past year are Helmsold, Priest of Bosau, *The Chronicle of the Slavs* (New York), a history of the Slavic-Germanic struggles of the 12th and 13th centuries, translated from the Saxon, with introduction and notes, by F. J. Tschann; E. J. Simmons, *English Literature and Culture in Russia (1553-1640)* (Cambridge, Mass.), a study of the importance of England's influence in Russia; *Catalogue of Books Available in English by Russians and on Russia Published in the United States* (New York), in which only a very few out-of-print volumes are included; T. A. Beresney, *Russian* (ib.), a textbook of the essentials of the language; G. Z. Patrick, *Elementary Russian Reader* (ib.), containing selected short stories, G. Kaus, *Catherine: The Portrait of an Empress* (ib.), a life of Catherine the Great, translated from the German; S. Graham, *Tsar of Freedom* (New Haven, Conn.), the life and reign of Alexander II of Russia; N. Popov, *Outline History of the Communist Party of the Soviet Union* (2 vols., New York); Mary S. Callcott, *Russian Justice* (ib.), an excellent study of the Russian penal system; H. Barbusse, *Stalin: A New World Seen Through the Eyes of One Man* (ib.), a biography, translated from the French; B. Jarrett, *The Emperor Charles IV* (ib.), a biography of the 14th-century King of Bohemia; C. Wilkinson, *Prince Rupert, the Cavalier* (Philadelphia), a biography of the Bohemian Prince, nephew of Charles I; M. Haiman, *The Fall of Poland in Contemporary American Opinion* (Chicago), a collection of 18th-century opinions on the dismemberment of Poland; Olga Husek, *The Czechoslovak Fallacy* (Middletown, Pa.), a protest against the treatment of the Slovaks by the Czechs; *Slovakia's Plea for Autonomy* (ib.), a criticism of the Czechoslovakia Union by "An Autonomist"; *Struggle* (New York), a new edition of anonymous account of terrorism in Yugoslavia, translated from the Yugoslav by L. Adamic; M. Savkovitch, *L'Influence du Réalisme français dans le Roman serbo-croate* (Paris); and *The Daina: An Anthology of Lithuanian Folk-Songs* (Chicago), with a critical study and preface by U. Katzenelenbogen.

Celtic. Two interesting Irish Folk Festivals were held in New York during the year. The first, directed by Eileen Curran on August 24, drew 2000 competitors for 250 contests and more than 4000 spectators, whereas the second, which was

the third annual *Feis* of the United Irish Counties Association, held on October 6, attracted 10,000 persons, including 1470 contestants (386 more than last year). The contests included folk singing and dancing, recitation of selections in Irish, competitions of bagpipe bands, playing of Irish musical instruments, etc. At the great Welsh Eisteddfod, held in Wales during the summer, the bardic crown was won by Gwilym R. Jones, editor of a weekly Welsh paper published in Liverpool. The chaired bard, E. Gwyndaf Evans, who is only 22, is the youngest man whose poetry has ever won the chair at the annual festival. He is a student at the University of Wales and the son of a small farmer. Pre-Celtic and Gaulish are represented by the following: J. Déchelette and R. Grenier, *Manuel d'archéologie préhistorique, celtique et gallo-romaine* (vol. vi; Paris); R. Grenier, *Archéologie gallo-romaine* (part ii, 2 vols.; ib.); A. Blanchet, *Carte archéologique de la Gaule romaine* (part iv; ib.), issued by the Académie des Inscriptions et Belles-Lettres; and M. Honnorat, *La Langue gauloise ressuscitée* (ib.).

Contributions to Irish include: *Heroes of Old Ireland* (New York), a collection of the best of the ancient Irish tales, edited by T. P. Cross and C. H. Slover; F. Shaw, *The Dream of Oengus* (Dublin), a very good edition of the text, with useful notes and a vocabulary; H. A. Carney, *Ireland's Contribution to Law* (Boston), a study of the ancient Brehon laws; L. J. Hopkin-James, *The Celtic Gospels: Their Story and Their Text* (New York), a first edition of the *Book of St. Chad* or *Teilo*, written, according to tradition, by St. Gildas before 720; H. De Blacam, *Gentle Ireland* (Milwaukee, Wis.), an account of the Christian culture in Irish history and modern life; A. M. Skelly, *The Sorrows and Glories of Ireland* (New York), a series of papers on Irish history and culture; R. D. Edwards, *Church and State in Tudor Ireland* (ib.), a history of the penal laws against Irish Catholics, 1534-1603; G. O'Nolan, *The New Era Grammar of Modern Irish* (Dublin), especially good for syntax, prosody, and word-formation; S. MacGiollarnath, *Peadar Chois Fharrige* (ib.), a delightful collection of folk-tales (in which, be it said, Ireland is richer than any country in Europe), all recorded from the same *seanchaigh*; T. O'Crohan, *The Islandman* (New York), reminiscences of the life and folklore of the Great Blasket Island, translated from the Irish by Dr. Flower; R. A. Anderson, *With Horace Plunkett in Ireland* (ib.), personal reminiscences of Sir Horace Plunkett's achievements; N. Mansergh, *The Irish Free State* (ib.), an analysis of its government and politics; W. G. Fay and Catherine Carswell, *The Fays of the Abbey Theatre* (ib.), a record of the founding and development of the Irish National Theatre; *Plays of Modern Ireland* (ib.), a collection of 10 plays selected for the purpose of showing the course which the new drama of Ireland has taken in the past 10 years; *The Collected Plays of W. B. Yeats* (ib.), a companion volume to his *Collected Poems*, including plays from 1892 to 1934; F. MacManus, *Stand and Give Challenge* (ib.), a tale of Donnachta Ruadh, one of the last of the Gaelic poets; and Seumas MacManus, *Bold Blades of Donegal* (ib.), a tale of an Irish lad.

Scotland is represented by T. J. Morrison, *The Cairn* (New York), the story of an ancient Scottish family; Agnes M. Mackenzie, *Robert the Bruce, King of Scots* (ib.), a biography; *The Devil in Scotland* (ib.), four tales of diablerie in

Scotland, including Burns, *Tam o'Shanter*, Scott, *Wandering Willie's Tale*, and Stevenson, *The Tale of Tod Lapraik*; *The Scots Book* (ib.), a miscellany of poems, folklore, prose, and letters about Scotland, compiled by R. M. Douglas; Sir Robert Rait and G. S. Pryde, *Scotland* (ib.), a survey of the country; and G. Blake, *The Heart of Scotland* (ib.), a description of Scotland today.

On Wales, we have B. G. Charles, *Old Norse Relations with Wales* (Cardiff), containing accounts of vestiges of Norse settlements in South Wales as well as the Norse element in the place-names of the Southwest coast; D. G. Jones, *Yr Areithiau Pros* (Caerdydd), a collection of Welsh prose exercises used in the Middle Ages; and L. W. Griffith, *Spring of Youth* (New York), recollections of a boyhood in Wales.

Germanics. Studies on German include Luise Haessler, *Old High German "Biteilen" and "Biskerien"* (Philadelphia), a University of Chicago dissertation, published by the Linguistic Society of America; M. P. Goetz, *The Concept of Nobility in German Didactic Literature of the Thirteenth Century* (Washington, D. C.), a dissertation of the Catholic University of America; E. G. Gudde, *Social Conflicts in Medieval German Poetry* (Berkeley, Calif.); A. Lang, J. Lechner, and M. Schmaus, *Aus der Geisteswelt des Mittelalters* (2 vols.; Munster), a collection of studies on the Middle Ages; J. M. Vincent, *Costume and Conduct in the Laws of Basel, Bern, and Zurich, 1370-1800* (Baltimore), a Johns Hopkins University dissertation; W. Andreas, *Deutschland vor der Reformation* (Stuttgart), an intensive investigation; J. Brodrick, S. J., *St. Peter Canisius* (New York), a biography of the Saint who established the Jesuits in Germany in the 16th century; W. H. Bruford, *Germany in the Eighteenth Century* (ib.), presenting the social background of the literary revival; Goethe, *Faust* (ib.), containing the original German version, with English translation and introduction by F. G. G. Schmidt; Maria dos Santos, *Goethe e as Mulheres* (Coimbra), published by the University of Coimbra; E. H. Zeydel, *Ludwig Tieck, the German Romanticist* (Princeton, N. J.), a study of the first exponent of the German Romantic movement; and A. E. Beau, *Rainer Maria Rilke e as Cartas de Sôror Mariana* (Coimbra), another study issued by the German Institute of the University of Coimbra.

The Scandinavians, as usual, distinguished themselves by publishing high-class scholarly studies, probably the best of the year. Among their chief contributions we may note *Four Icelandic Sagas* (Princeton, N. J.), translated, with introduction, notes and bibliography, by G. Jones; M. Jeffrey, *The Discourse in Seven Icelandic Sagas* (Bryn Mawr, Pa.); *The Earliest Norwegian Laws* (New York), translations of the Gulathing and Frostathing laws of the 12th century, by L. M. Larson; *Old Norse Poems* (ib.), a metric translation, with commentary, of eighteen poems, by L. M. Hollander; T. Knudsen and A. Sommerfelt, *Norsk Riksmålsordbok* (Oslo), a splendid dictionary which has now reached the word, *hånd*; A. Sommerfelt, *Hvordan Sproget Blir Til* (ib.), containing an excellent study; *Norwegian-American Studies and Records* (vol. viii; Northfield, Minn.), a collection of nine papers, issued by the Norwegian-American Historical Association; C. Grimbers, *A History of Sweden* (Rock Island, Ill.), translated and adapted by C. W. Foss; and Selma Lagerlof, *Harvest* (New York), memoirs

and folk-tales of the Värmland, with four public addresses, translated from the Swedish.

Dutch and Frisian are represented by J. Hart, *Picture Tales from Holland* (New York), a collection of folk-tales; J. J. Hof, *Friesische Dialect-geographie* (The Hague), a linguistic atlas; and A. E. H. Swaen, *Engelsch Woordenboek* (Zutphen), an excellent Dutch and English dictionary.

Finnish has become very popular in America during the year, possibly because it is the language of the one European country that considers a signed contract as something more than a scrap of paper. Though it belongs to the Finno-Ugric group of languages and is, therefore, not Germanic, —but rather a close relative of Hungarian—we may nevertheless introduce it here, because of its numerous Teutonic borrowings. For the benefit of learners we may, therefore, mention H. Jensen's excellent manual, *Finnische Grammatik* (Gluckstadt).

English. Since English dictionaries have already been listed under the heading *Dictionaries* above, we shall mention here first a few important titles dealing with the English language: J. S. Armour, *The Genesis and Growth of English* (New York), an outline of philology for students; S. Robertson, *The Development of Modern English* (ib.), supplying its historical background; F. W. Bateson, *English Poetry and the English Language* (ib.), a history of their interrelationship; Mary Serjeantson, *A History of Foreign Words in English* (London) discussing linguistic changes; G. N. Clark, *The Dutch Influence on the English Vocabulary* (New York), being No. 44 of the Society of Pure English Tracts; E. Weekley, *Something About Words* (ib.), a collection of essays on the derivations and uses of words; J. B. Opydycke, *Get It Right!* (ib.), a cyclopedia of correct English usage; A. G. Kennedy, *Current English* (Boston), a study of present-day usages and tendencies; R. Whitcomb, *Talk United States!* (New York), a manual of colorful Americanisms; W. C. Barnes, *Arizona Place-Names* (Tucson), an account of the origins of names, history, and location of Arizona places; R. L. Ramsay, A. W. Read, and Esther G. Leech, *Introduction to a Survey of Missouri Place-Names* (Columbia, Mo.), an account of the method of the work, with a survey of names in Pike County; *Dialect Notes* (vol. vi, part ix; New Haven, Conn.), edited by M. L. Hanley, and including vol. ii, part vii of *Thornton's American Glossary*; C. Brooks, Jr., *The Relation of the Alabama-Georgia Dialect to the Provincial Dialects of Great Britain* (Baton Rouge, La.), a comparative study; and J. Padin, *English in Puerto Rico* (San Juan, P. R.), a study of its use in the Territory today.

Anglo-Saxon and medieval English literature are studied in R. H. Hodgkin, *A History of the Anglo-Saxons* (2 vols.; New York), containing their history from the earliest times to the reign of Alfred the Great; Adeline C. Bartlett, *The Larger Rhetorical Patterns in Anglo-Saxon Poetry* (ib.), a valuable study of definite structural patterns through periods of 5 to 50 verses or even more; *Records of the Templars in England in the 12th Century* (London), edited by B. A. Lees; H. Henel, *Studien zum altenglischen Computus* (Leipzig), a collection of studies; M. D. Lobel, *The Borough of Bury St. Edmund's: A Study in the Government and Development of a Monastic Town* (Oxford); G. A. Plimpton, *The Education of Chaucer* (New York), a study of the background of his period; Chaucer, *The Canterbury Tales* (ib.), translated into modern English

verse by F. E. Hill; *Geoffrey Chaucer's Hymn to the Blessed Virgin* (Milwaukee, Wis.), translated into modern English, with an introduction, by A. M. Townsend; William Langland, *The Vision of Piers Plowman* (New York), a modern English rendering of the 14th-century poem by H. W. Wells; and Charlotte D'Evelyn, *Peter Idley's Instructions to His Son* (ib.), letters of a 15th-century English country-gentleman, published by the Modern Language Association of America.

Contributions to the English Renaissance include R. M. Sargent, *At the Court of Queen Elizabeth: The Life and Lyrics of Sir Edward Dyer* (New York), a critical and biographical study; Marjorie Bowen, *Mary, Queen of Scots: Daughter of Debate* (ib.), a biography; E. A. Tenney, *Thomas Lodge* (Ithaca, N. Y.), a biography of the Elizabethan poet and physician; R. L. Greene, *The Early English Carols* (New York), a collection of carols up to 1550; C. B. Judge, *Specimens of Sixteenth-Century English Handwriting* (Cambridge, Mass.), facsimiles taken from public and private records; L. B. Wright, *Middle-Class Culture in Elizabethan England* (Chapel Hill, N. C.), a study of intellectual life of the period; H. O. White, *Plagiarism and Imitation During the English Renaissance* (Cambridge, Mass.), a study of critical opinion in the 16th and 17th centuries; R. W. Chambers, *Thomas More* (London), a biography; K. O. Myrick, *Sir Philip Sidney as a Literary Craftsman* (Cambridge, Mass.), a new evaluation of the poet; and Janet Spens, *Spenser's Faerie Queene* (New York), an interpretation.

The 17th century is represented by *England's Helicon, 1600, 1614* (2 vols.; Cambridge, Mass.), an anthology of poems by Sidney, Marlowe, Spenser, Raleigh, Drayton, and others, edited by H. F. Rollins; *The New Temple Shakespeare* (23 vols.; New York), a new edition, by Prof. M. R. Ridley, of the *Temple Shakespeare*, first published in 1894; *Shakespeare* (vol. iv; ib.), five plays edited by D. Bush; J. D. Wilson, *What Happens in Hamlet* (ib.), a study of dramatic problems and technique, Caroline F. E. Spurgeon, *Shakespeare's Imagery and What It Tells Us* (ib.), a study of the metaphors and similes used by Shakespeare, E. Fripp, *Shakespeare, Man and Artist* (2 vols.; ib.); A. C. Sprague, *Shakespeare and the Audience* (Cambridge, Mass.), a study of the theatrical background of his day; R. B. Sharpe, *The Real War of the Theatres: Shakespeare's Fellows in Rivalry with the Admiral's Men, 1594-1603* (Boston), a chronological survey of the theatrical events of the period; Hilaire Belloc, *Milton* (Philadelphia), a new interpretation; *The Works of John Milton* (vols. viii, ix, xi, xv, xvi, xvii; New York), six new volumes of the 18-volume Columbia University edition; A. Harbage, *Sir William Davenant, Poet, Venturer, 1606, 1668* (Philadelphia), a critical and biographical study; A. Bryant, *Samuel Pepys: The Years of Peril* (New York), the second volume of the biography, dealing with the period of 1669-83; and M. Summers, *The Playhouse of Pepys* (ib.), a study of English drama from 1660 to 1682.

On the 18th and 19th centuries the following may be noted: D. L. Durling, *Georgic Tradition in English Poetry* (New York), a carefully prepared study on the revival and influence of the classic georgic form of verse in 18th and 19th century poetry; S. H. Monk, *The Sublime: A Study of Critical Theories in XVIIIth Century England* (ib.), an investigation of the esthetics of this period,

issued by the Modern Language Association of America; Winston Churchill, *Marlborough, His Life and Times* (vols. iii and iv; *ib.*), dealing with the period 1702-05; Shane Leslie, *The Script of Jonathan Swift and Other Essays* (Philadelphia), being the Rosenbach Lectures on Bibliography for 1933-34; James Boswell, *The Life of Samuel Johnson* (New York), a one-volume edition, prepared by R. Ingpen, originally published in three volumes 30 years ago; *Correspondence of Thomas Gray, 1734-1771* (3 vols.; *ib.*), edited by the late Paget Toynbee and L. Whibley; S. Gwynn, *Oliver Goldsmith* (*ib.*), a biography; S. Shellabarger, *Lord Chesterfield* (*ib.*), a biography; *The Torrington Diaries of the Hon. John Byng* (vol. ii; *ib.*), a journal of tours in the Midlands, Bedfordshire, and Lincolnshire, 1789-91, edited by C. B. Andrews; and *Early Victorian England* (2 vols.; *ib.*), studies on manners, customs and background of the period, edited by G. M. Young.

General works include E. Legouis and L. Cazamian, *A History of English Literature* (New York), a revised one-volume edition, translated from the French; *The English Drama* (*ib.*), an anthology of 30 plays, 900-1642, edited by E. W. Parks and R. C. Beatty; A. Gardner, *A Handbook of English Medieval Sculpture* (*ib.*); M. D. Anderson, *The Medieval Carver* (*ib.*), a study of English church sculpture of the Middle Ages; and H. C. Hunter, *How England Got Its Merchant Marine, 1066-1766* (*ib.*), a history.

Romance. GENERAL. An indispensable work for all students of modern languages is the excellent *The Year's Work in Modern Language Studies* (vol. v; Oxford), edited by Profs. W. J. Entwistle and L. W. Tancock for the Modern Humanities Research Association. The present volume, which deals with the year ending June 30, 1934, is divided into six sections, *viz.*, 1) Medieval Latin Studies, 2) Romance Languages and Literatures, including Italian, French, Provençal, Catalan, Spanish, Portuguese, Basque, and Rumanian, 3) Germanic Studies, including German and Dutch, 4) Celtic Studies, including Irish and Welsh, 5) Slavonic Studies, limited in this issue to Polish, and 6) Modern Greek Studies.

French. Studies on the French language include E. Lommatsch, *Hundert altfranzösische Sprichwörter des Gemeinen Mannes (Proverbe au Vilain)* (Limburg), a splendidly edited collection issued in honor of the 100th birthday of A. Tobler, May 23, 1935, M. K. Pope, *From Latin to Modern French, With Special Consideration of Anglo-Norman* (Manchester, Eng.); F. Brunot, *Histoire de la Langue française* (vol. viii, Paris), of which part i deals with *Le français dans les divers pays d'Europe* and parts ii and iii, *Le français hors de France au XVIIIe siècle*; E. Huguet, *L'Évolution du Sens des Mots depuis le XVIIe Siècle* (*ib.*); G. and R. Le Bidois, *Syntaxe du Français moderne* (*ib.*); J. Damourette and E. Pichon, *Essai de Grammaire de la Langue française* (vol. iv; *ib.*); A. Moufflet, *Encore le Massacre de la Langue française* (*ib.*); and O. Leroy, *A Dictionary of French Slang* (New York), devoted to both slang and colloquial terms.

Old and Middle French are represented by E. K. Rand and L. W. Jones, *The Earliest Book of Tours* (Cambridge, Mass.), a description of an 8th-century copy of Eugeippius's extracts from St. Augustine; M. Skidmore, *The Moral Traits of Christian and Saracen as Portrayed by the Chansons de Geste* (Colorado Springs, Colo.), a thorough investigation; Ruth Parmly, *The Geographi-*

cal References in the "Chanson de Garin le Loherain" (New York), a valuable study issued by the Institute of French Studies; O. E. Albrecht, *Four Latin Plays of St. Nicholas* (Philadelphia), a study of the sources of the legends, with text from the 12th-century Fleury Play-Book; J. C. Russell and J. P. Heironimus, *The Shorter Latin Poems of Master Henry of Avranches Relating to England* (Cambridge, Mass.), edited with biographical and critical notes; M. Waldman, *Joan of Arc* (New York), a biography; and W. F. Patterson, *Three Centuries of French Poetic Theory* (2 vols.; Ann Arbor, Mich.), a masterly and thorough critical history of the chief Arts of Poetry of France from 1328 to 1630, presented as a doctoral dissertation at Columbia University.

Contributions to the Renaissance and the 17th century include M. Françon, *Les Albums poétiques de Marguerite d'Autriche* (Cambridge, Mass.), a critical study, written in French; *Pierre Gringore's Pageants for the Entry of Mary Tudor into Paris* (Chicago), a description of pageants devised in 1514, edited from an unpublished French MS by C. R. Baskerville; F. Hackett, *Francis the First* (New York), a biography; S. Putnam, *Marguerite of Navarre: First Modern Woman* (*ib.*), an unreliable biography of the great poet and author, who was the sister of Francis I; *Rabelais, Volume I, Gargantua* (*ib.*), a second edition of the translation of W. F. Smith; *Concerning Heretics* (*ib.*), an anonymous tract on religious liberty attributed to Sébastien Castellion and published in 1554, translated into English by R. H. Bainton; H. Wolfe, *Ronsard and French Romantic Poetry* (Oxford), the Zaharoff Lecture for 1934; *The Essays of Michel de Montaigne* (vol. ii; New York), translated by J. Zeitlin; F. Watson, *The Life and Times of Catherine de Medici* (*ib.*), a biography; and L. Mouton, *Epernon of Old France* (*ib.*), a biography of a turbulent 17th-century Duke, translated from the French.

Works on the later periods and general works that deserve mention include the following: C. H. Van Duzer, *Contribution of the Ideologues to French Revolutionary Thought* (Baltimore), a Johns Hopkins dissertation on the background of the French Revolution; A. P. Moore, *The "Genre Poissard" and the French Stage of the 18th Century* (New York), a study of popular dialect in the drama; Margaret S. Libby, *The Attitude of Voltaire to Magic and the Sciences* (*ib.*), revealing the influence of scientific discoveries on Voltaire's thought; C. P. Cambiaire, *Le Rôle de la France dans l'Expansion des États-Unis* (Paris), a valuable study on France's influence in America; D. Saurat, *Modernes* (*ib.*), a comprehensive and critical survey of contemporary literature; and E. Bestaux, *La Poésie de Lionello Fiumi* (*ib.*), a study of the work of a leading poet.

Italian. Contributions to this field include C. Merlo, *Studi glottologici* (Pisa); G. Bottiglioni, *Atlante linguistico-etnografico italiano della Corsica* (vol. i, Cagliari); G. A. Stampa, *Der Dialekt des Bergell, I: Phonetik* (Aarau); C. Tagliavini, *Il Dialetto del Livinallongo* (Bolzano); M. Bartoli, *Questioni linguistiche e diritti nazionali* (Turin); J. A. Symonds, *Renaissance in Italy* (2 vols., New York), a new edition of a classic work; L. D. Einstein, *The Italian Renaissance in England* (*ib.*), the seventh printing of an authoritative study; G. Papini, *Dante vivo* (*ib.*), a biography; May E. Southworth, *A Certain Young Man of Assisi* (San Francisco), a biography of St. Francis; E. C. Richardson, *Materials for a Life of Jacopo da*

Varagine (New York), the first biography in English of this 13th-century "Maker of the Italian Language"; A. Cecchini, *Serafino Aquilano e la Lirica inglese del '500* (Aquila), a study of the widespread influence of this 15th-century poet; E. MacLagan, *Italian Sculpture of the Renaissance* (Cambridge, Mass.), the Charles Eliot Norton Lectures of 1927-28; G. H. Huntley, *Andrea Sansovino* (ib.), a study of the famous forerunner of Raphael and Michelangelo; *Leonardo da Vinci's Notebooks* (New York), a new and revised edition by E. McCurdy; D. L. Finlayson, *Michelangelo, the Man* (ib.), a biography; H. H. Powers, *The Art of Michelangelo* (ib.); J. S. Kennard, *Masks and Marionettes* (ib.), a history of the Commedia dell'Arte and of Italian marionette productions; F. R. Bryson, *The Point of Honor in 16th-Century Italy* (ib.), a publication of the Institute of French Studies; Paolo Giovio, *An Italian Portrait Gallery* (Boston), translated from the *Elogia Doctorum Virorum*, 1557, by Florence A. Gragg; Iris Origo, *Leonardi* (New York), a biography of the poet; S. Barr, *Mazzini: Portrait of an Exile* (ib.), a biography of the nationalist; and P. Frischauer, *Garibaldi: The Man and the Nation* (ib.), a biography.

Provençal. F. M. Ford, *Provence: From Minstrels to the Machine* (Philadelphia), a history and description; R. Altrocchi, *Cansoun de Sant Alexis* (Berkeley, Calif.), an 18th-century version of the legend of the Saint; and C. Brunel, *Bibliographie des Manuscrits littéraires en ancien Provençal* (Paris).

Portuguese. The ancient University of Coimbra continues to be the most active centre of Portuguese studies in the world. Among its publications are the following three contributions by Eva Seifert, *O Legado dos Germanos a Romãna ocidental, Uma Volta pelos Arabismos da Terra ibero-românica, e Germânia Romana*; J. da Providência Costa's excellent *Catálogo de Manuscritos da Biblioteca da Universidade*, Nos. 556-821; E. F. Almujara, S.J., *El Manuscrito 726 de la Biblioteca de la Universidade de Coimbra, o la "Historia de varios Reyes de Castilla"*; K. Sudhoff, *Pedro Hispano ou, melhor, Pedro Lusitano, Professor de Medicina e Filosofia e, finalmente, Papa João XXI*; A. da Rocha Madalal, *Visitação geral do Estado espiritual da Sé de Coimbra, organizada em 1556 pelo Bispo D. João Soares*; H. Hatzfeld, *A Expressão de "O Santo" na Linguagem poética dos Românticos portugueses e catalães, tradução de F. Morais*; H. Meier, *Cartas inéditas de Antero de Quental a Wilhelm Störck*; and J. da Providência Costa, *Dr. J. Mendes dos Remédios* (1867-1932). To these may be added M. S. Kastner, *Cravistas Portuguesas* (Mainz), an important anthology of old Portuguese harpsichord music.

Spanish. Of the few Spanish studies of value the following may be noted: J. Munz, *Maimonides: The Story of His Life and Genius* (Boston), a biography, translated from the German; R. B. Merriman, *Rise of the Spanish Empire in the Old World and the New* (London); W. T. Walsh, *Isabella, the Crusader* (New York), a biography of the Queen; V. Marcu, *The Expulsion of the Jews from Spain* (ib.), a history of the Inquisition; S. de Madariaga, *Don Quixote, An Introductory Essay in Psychology* (ib.); F. P. Casamitjana, *Ramón de la Cruz and der französische Kultur-einfluss im Spanien des XVIII. Jahrhunderts* (Bonn); Baltasar Gracián, *A Truth-telling Manual and the Art of Worldly Wisdom* (Springfield, Ill.), a new translation of this collection of aphorisms from the edition of 1643, by M. Fischer; Ada M. Coe, *Catálogo bibliográfico y crítico de las Comedias anunciadas en los Periódicos de Madrid desde 1661 hasta 1819* (Baltimore); and H. Gressen, *Ibsen and Spain* (Cambridge, Mass.), a comparative study.

Spanish-American. Contributions to this field are very numerous, but only a few titles may be mentioned here. Thus, L. L. Sell, *Pan-American Dictionary and Travel Guide* (New York); *Latin-American Libraries* (Washington, D. C.), compiled by C. E. Babcock; H. G. Doyle, *A Tentative Bibliography of the Belles-Lettres of the Republics of Central America* (Cambridge, Mass.); S. M. Waxman, *A Bibliography of the Belles-Lettres of Venezuela* (ib.); P. A. Means, *The Spanish Main* (New York), its history from 1492 to 1700; J. L. Mitchell, *The Conquest of the Maya* (ib.), the history and culture of these tribes; F. A. Kirkpatrick, *The Spanish Conquistadores* (ib.), an account of their ravages in the 16th century; Cora Walker, *Guatemo: Last of the Aztec Emperors* (ib.), a history of the last days of the Aztec Empire and the invasion of Cortez; P. S. Taylor, *An American-Mexican Frontier* (Chapel Hill, N. C.), a historical and social study of Nueces County, Texas; J. F. Dobie, *Tongues of the Monte* (New York), an account of the people and folklore of Northern Mexico; J. F. Dobie, *Puro Mexicano* (Austin, Texas), Mexican legends, folklore, and songs; J. F. Rippey and J. T. Nelson, *Crusaders of the Jungle* (Chapel Hill, N. C.), an account of the pioneer Catholic padres; Lily de J. Osborne, *Guatemala Textiles* (New Orleans), a study of their symbolism; and J. F. Normano, *Brazil: A Study of Economic Types* (Chapel Hill, N. C.).

Phonetics. Useful contributions include C. E. Parmenter and Hilda Norman, *Suggestions for the Use of Phonograph Records in the Teaching of Italian* (Chicago), reprinted from *Italica*; Constance Davies, *English Pronunciation from the 15th to the 18th Century* (London); J. S. Kenyon, *American Pronunciation* (Ann Arbor, Mich.), a sixth, revised edition; C. E. Parmenter and S. N. Treviño, *The Length of the Sounds of a Middle Westerner* (New York), reprinted from *American Speech*; C. R. Walsh, *The Science and Art of Speech* (ib.), a manual of correct speech habits; and C. S. Bluemel, *Stammering and Allied Disorders* (ib.), containing a new theory as to causes and treatment.

PHILOSOPHY. The circle of Logical Positivists with representatives in Vienna, Prague, and Warsaw appeared to command more attention in 1935 than the other European schools of philosophy. Wherever the influence of this school extended analysis, rather than speculation, was ascendant and logic, symbolism, and theory of science were pursued in preference to bolder and, perhaps, more dangerous, subjects. Social philosophy, especially the theory of the state and of history, also excited a great deal of interest, particularly in Germany, and historical studies seemed less remote and more mindful of the discords and divisions of present-day society.

These various directions of interest were well illustrated in the annual meeting of the American Philosophical Association (Eastern Division) at Johns Hopkins University. Harold A. Larrabee, the first speaker, read a paper on Pareto (whose extensive sociological work, *Mind and Society*, was translated into English this year) in which he maintained that Pareto's claims to impartiality and scientific objectivity are amply contradicted by his

outspoken prejudice and his bitter antipathies, that his theory of history should be called "the temperamental interpretation," and that his system constitutes a philosophy ready-made for Fascism. Richard Kroner of Kiel, the next speaker, defended an Hegelian philosophy of history, maintaining that history is the realization of the Idea of which state and religion are embodiments, and that all wars and conflicts are due to tensions within the Idea, and hence are spiritual and necessary. Morris Cohen protested in the name of liberalism and democracy to the mysticism and reaction implied in this view. Sterling P. Lamprecht's paper asserted the paradox that historical events are both caused and contingent, while James Burnham's essay upheld a variant of the Marxian theory of history.

In a later session devoted to logic Charles A. Baylis rejected Lukasiewicz's argument for the existence of propositions which are neither true nor false, maintaining that it rested on a false assumption. Lukasiewicz had argued that the proposition "I will be in Warsaw at a certain future time" is possible but not necessary and hence neither true nor false. For if this proposition were true, his presence in Warsaw at that time would be necessary, and if false, his presence there would be impossible. But both of these alternatives are excluded by the original admission that his presence there is possible but not necessary. Baylis's rejection of this argument, however, was not a challenge to Lukasiewicz's three-value logic. (See 1932 YEAR BOOK under PHILOSOPHY.) A. Ushenko also attacked a theory of the Logical Positivists, that, namely, sentences about space-time are verbal. Ushenko contended that such assertions are "definite" descriptions, but Rudolf Carnap, the chief spokesman of the Logical Positivists, dissented sharply.

A session devoted to Plato featured four papers of more than usual interest, but the part of the programme which was felt to be most important was the final session in which Rudolf Carnap of the Vienna Circle presented his theory of "Testability and Meaning" and Arthur O. Lovejoy of Johns Hopkins replied with a searching and destructive critique. The main target of this criticism was the Logical Positivist's definition of the meaning of a sentence as the "protocol" sentences expressing the conditions necessary to its verification. Lovejoy pointed out the short-comings of this definition, its failure to recognize time differences and subjective meaning, its inability to escape from solipsism, though scientific verification demands agreement with other minds. In replying to these criticisms it appeared to many present that Carnap unconsciously shifted from exciting paradox to drab methodology and back again. The Presidential Address by James B. Pratt defended the interaction theory of mind and body.

The empirical and logistic programme of the logical positivists has been clarified and elaborated by a number of important books this year. Hans Reichenbach in *Wahrscheinlichkeitslehre* investigates the logical and mathematical foundations of the probability calculus, accepting a form of the frequency theory and making use of the recently developed three-value logic. An interesting feature of the book is the attempt to escape from the difficulty of infinite series of probabilities by the view that propositions asserting probability are themselves only probable.

Philipp Frank, in *Das Ende der Mechanistische Physik*, launches a withering attack upon idealistic and metaphysical inferences from modern physics,

and advocates a logical language which would eliminate such speculation automatically. Rudolf Carnap in *Logische Syntax der Sprache und Philosophie und Logical Syntax* (a set of lectures delivered at London) develops in further detail his doctrines that philosophical clarity can be achieved and pseudo-object sentences avoided if sentences about content are only reduced to formal sentences stating implications, that most traditional philosophical problems, such as the mind-body problem, are meaningless when clearly stated, etc. It is apparent, however, that certain earlier views have been abandoned as, for instance, the Wittgensteinian doctrine of atomic sentences. Josef Schachter's *Prolegomena zu einer kritischen Grammatik*, like Carnap's books, attempts to reduce philosophical problems to details of logical syntax. In England the Cambridge group (G. E. Moore, Wittgenstein, Wisdom, and others) pursues similar methods and philosophy more and more becomes a matter of syntax (see *Proceedings of the Aristotelian Society*, 1934-1935).

The philosophical atmosphere in Germany is utterly different. Instead of modest sense-data, sentences and syntax we find Spirit, Volk, State, Race, Destiny, Führer, Submission to the Will of History as the leading concepts; in place of the empiricism of Hume, the positivism of Mach and Poincaré, and the logicism of Wittgenstein, we find an eager return to the authority of Hegel, Fichte, Treitschke, Gobineau, Chamberlain, etc. Thus Theodor Litt in *Philosophie und Zeitgeist* maintains that philosophy must occupy itself with "the Nordic Man, the German Man, whom we envisage in the familiar *Weltanschauung* of our time" and whom we recognize as the canon by which the validity of that *Weltanschauung* must be tested. Philosophy, Litt maintains, should be partisan and timely, lending itself frankly to national pedagogy. "Objectivity" should be discarded. Arnold Gehlen in *Der Staat und die Philosophie* deplors the decline of philosophy since the Enlightenment but looks forward to its "epochal development under National Socialism." Before the advent of the Third Reich philosophers had no real subject-matter since they regarded the state as an apparatus alterable to suit their purposes and therefore imagined that a great deal of freedom was both possible and desirable. Another mistake was to suppose that State, Race, and Freedom can be understood intellectually.

The National Socialist philosophers seem to agree that the State (which is identical with Volk when embodied in the personality of the Führer and which has the same destiny as Race), since it is self-determining and self-justifying, is not answerable to humanitarian or utilitarian ideals nor, indeed, to any external standard whatsoever; and much space is taken up with condemnation of such ideals as progress, democracy, individual liberty, equality of races, the good of mankind, etc., which are regarded as selfish and un-German. Heinrich Oestereich's book, *Freiheitsidee und Rechtsbegriff in der Philosophie von Johann Gottlieb Fichte*, illustrates this tendency. *Liberté* in Rousseau's sense is ridiculed but Fichte's "higher" and more nebulous, transcendental freedom, the kind of freedom which could obtain under the most absolutistic government, is praised. Friedrich Weidauer, to take another example, maintains that value-judgments may have all the characteristics of scientific propositions including "universal acceptance," and then gives as an example: The Führer is more valuable than his followers, assuming that the good of

the *Volk* is the good. Here is exhibited the characteristic failure to recognize that there are other people besides the German people to whom the *Führer* might not be acceptable, whereas all peoples accept the law of gravitation.

Kurt Schilling's *Der Staat* is a more worthy representative of these philosophical tendencies. The state, like marriage, is described as a union of wills not for some stipulated purpose, but for any purpose which time discloses. The many-sided, determined enmity toward Marxism, communism, and democracy, which explains so much of recent German philosophy, results in attacks upon "materialism" in all its forms. Driesch's *The Overcoming of Materialism* (in German) which begins a new series and Harm's *Idealismus Jahrbuch*, which published its first volume this year, may be taken as examples in point. Doubtless this tendency has a few exceptions. Thus Ferdinand Tönnies in *Geist der Neuzeit*, though he is not consistent about it, accepts historical materialism.

The most important philosophical movement in modern Germany, phenomenology, has been almost silent in the past few years. The phenomenology *Jahrbuch* has not appeared and *Logos* has been transformed into a German culture magazine. One phenomenologist, Nicolai Hartmann, whose ethics is rather Platonic and aristocratic, has remained very active, publishing this year an excellent book, *Zur Grundlegung der Ontologie*. Another good book by the Kantian, Julius Kraft, proves the "impossibility" of *Geisteswissenschaft*, but also seems to undermine the philosophical basis of the third Reich. Ernst Von Aster's *Die Philosophie der Gegenwart* is a splendid review of modern movements in German philosophy but like many of the more creditable works, was published abroad.

If historical materialism is anathema in Germany it is the basis of all philosophy in Russia. Yet within the limits set by Marxism there is still much room for violent disagreements. The chief polemics in the past few years have been directed against the Menshevik Idealists on the one hand and the Mechanists, on the other, representing opposite deviations from Marxism, with Deborin as the principal spokesman of the first, and Bucharin the main sponsor of the second. Orthodox Russian philosophers are now committed to non-mechanistic "leaps" both in nature and in society (as much as are the emergent evolutionists) and have no difficulty in deriving this view from Marx and Engels. Marxian philosophers are more resolute and successful in connecting philosophical theory with social and economic practice than are their opponents, and naturally the question of "leaps" has practical significance. Thus, M. Z. Selektor in *Dialectical Materialism and the Theory of Equilibrium* (a book which should perhaps be translated) argues that Bucharin's doctrine that the productive forces in any society determine the productive relations, but not conversely, led him to the politically disastrous view which he held on the inception of the first Five Year Plan, that socialism could not be developed independently in an economically backward country. Apparently, Bucharin, having seen his errors, on the practical side, has discarded his mechanistic theory. For a general review of Russian philosophical thought in English the reader is referred to *Marxism and Modern Thought*, edited by Bucharin.

In French philosophy, the most interesting book for English readers is perhaps the translation of Henri Bergson's *The Two Sources of Morality and Religion*. Employing his well-known principles

of biologism, mysticism, intuition, and instinct vs. intellect and mechanism, Bergson proceeds to distinguish closed and open societies. In the first "the members hold together caring nothing for the rest of humanity, on the alert for attack or defence." The moral principle in this society is the cohesive force binding its members into a rigid, changeless, solidarity, perpetuated by the "myth-making function" and "static religion." Open societies come about through the action of a few rebels who seek to break the closed society and by their non-conformity and mystical aspiration to lead the way from the City to Humanity. If successful, of course, they are bound to employ symbols and myths and thus to return in a measure to the principle of the closed society and to compromise their mystical, dynamic religion by elements of static ritual. It is an unfortunate consequence of anti-intellectualism that these new aspirations cannot be known by society until it has already adopted them. But the most serious shortcoming of this brilliant book is the entire neglect of economic motives. The representation of history as a conflict of classes, for example, is referred to the dramatic proclivities of historians.

A great many valuable historical books have appeared in France. *La loi de réalisation humaine dans Saint Thomas* by E. Rolland, for example, argues that the supernaturalism in Christian Ethics allows for an endless continuity of moral life, not provided for by opposing systems. The same author's treatment of the problem of God in the philosophy of Leibniz is also worthwhile. Jacques Maritain has also published two books this year: *La Philosophie de la Nature* and in translation, *Freedom in the Modern World*, which expound faithfully, yet with an eye to modern developments, the Thomist philosophy. Thus, the latter concludes that the world has entered a revolutionary period, and he regrets that the preoccupation with a change in the visible world has distracted men from the true revolution which is spiritual. In an appendix the Thomist doctrine of "Person and Property" is applied to modern problems.

A number of valuable Platonic studies have also appeared. Thus Michael B. Foster's *The Political Philosophies of Plato and Hegel* is an ambitious attempt to present two of the greatest political systems in contrast. Harold Cherniss's book, *Aristotle's Criticism of Presocratic Philosophy*, is another of the many contributions to Platonic scholarship appearing during the year. Another book of outstanding importance, *A Documentary History of Primitivism and Related Ideas*, by A. O. Lovejoy and others, traces the history of important ideas through the Greek period. Later volumes will carry the same investigation down to modern times.

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PHOTOGRAPHY. Color processes led the aroused public interest in photography throughout the world during the year. The keynote of this interest was sounded in April with the announcement of Kodachrome, an entirely new three-color subtractive process of amateur motion pictures. The film was described by its inventors, L. Mannes and L. Godowsky, Jr., as being "multiple-coated on one side of the support with three emulsions, each sensitive to one of the primary colors, these emulsions being separated from each other by intermediate gelatin layers." Exposures are made in an ordinary 16 mm. camera at one stop larger than is used for black and white pictures. Processing is carried out in special continuous machines which develop and reverse the film, as well as transform each image successively according to its depth, into its corresponding complementary color. Three closely superimposed positive dye images, free of silver and silver salts, comprise the final picture. This process truly represents a triumph in chemical research and emulsion manufacturing skill. (*Brit. J. Phot.* 82: 275, May 3, 1935; also *J. Soc. Mot. Pict. Eng.* 25: 65, July, 1935.)

Another significant event of the year was the release of the first full-length feature picture, "Becky Sharp," made on 35 mm. film by the three-color subtractive process of Technicolor, Inc. The plans of the major producing companies for 1935-36 indicated that an extensive use will be made of color especially in connection with the various

types of short subjects. (*Motion Picture Herald* 120: 13, July 20, 1935.)

A color newsreel, by the Dufaycolor process, of the 25-year Jubilee of England's sovereigns was shown in the London theatres in May.

It was reported that Walt Disney, who has pioneered so successfully in the use of color in sound cartoons, was working on a color feature cartoon, *Little Snow White*, to be completed in 1936. (*Fortune* 10: 88, November, 1934.) It is also of interest that all details of the story action in a sound cartoon are cued according to the bars of music; 24 frames to the bar for normal tempo, 32 frames for slower tempo, and 20 frames for faster tempo. Picture, music, and sound effects are each recorded separately and later combined by re-recording. (*Amer. Cinemat.* 16: 76, February, 1935.)

Further improvement was noted in the quality of the three-color work being done by commercial photographers. Some workers, like Steichen, made only a two-color negative separation from which were printed three positives. (*Comm. Photog.* 10: 256, May, 1935.)

New color print processes of commercial interest were the Irix and the Chromotone methods. The former was stated to be an imbibition process utilizing a special type of dyed wash-out reliefs. With the latter, three metal-toned collodion-gelatin layers were "registered" on a paper surface.

Aerial photographs were being made daily in some part of the world of events of sufficient importance. The larger newspapers of the world owned one or more planes but none were probably better equipped than the "Early Bird," the amphibian monoplane of the *Detroit News*. Three camera installations at different locations within the plane made it possible to photograph at any desired angle. A gunsight mounted on the pilot's windshield served as the view finder and the cameras were operated either by the pilot or the observer by remote control. (*Editor & Publisher*, 67: Jan. 12, 1935, p. 11.)

Much of the exploration work of the second Byrd Antarctic Expedition was carried out right in the huts under the snow at Little America by studying aerial photographs made during the flights.

Aerial photographs were made regularly of the lake formed by Boulder Dam in Arizona for each 20 feet rise of the water. An exhaustive study of soil erosion was being made from these photographs in the programme to protect the life of the reservoir. A special ten-lens camera was used for certain parts of this project and for a survey in the Rio Grande valley where a total of 84,000 square miles of territory was being mapped for the Federal Government.

The stratosphere balloon, *Explorer II*, with Capt. A. W. Stevens, observer in charge, and Capt. O. A. Anderson as pilot, ascended to a new world's record of over 72,300 feet on Nov. 11, 1935. Much useful photographic data were collected during this successful flight, which was sponsored by the National Geographic Society and the U.S. Army Air Corps. The camera was carried to the lowest depth that man has ever descended in the oceans of the earth when Beebe was lowered 500 fathoms (3028 feet) in his "bathysphere" globe in August, 1934. (*Nat. Geog. Mag.* 66: 661, December, 1934.)

Advantages of copying books, manuscripts, and bibliographical data on 35 mm. and 16 mm. film are listed by Schellenberg as follows: (1) making accessible rare editions, expensive collections, original data; (2) preservation of impermanent materials; (3) making available special catalogues and

other classified data. (*Library J.* 60: 289, April, 1935.) Over 150,000 pages of facts and figures of the NRA proceedings were recorded on 16 mm. film occupying about one cubic foot of storage space. A Shanghai publishing firm had started the enormous task of photographing each page of a handwritten Chinese encyclopedia which fills 1500 volumes.

A permanent photographic record is made of each vote in the Riksdag or Swedish Parliament by photographing a panel showing the location of the members and their vote. (*Sci. Amer.* 152: 276, May 1935.)

Progress in motion pictures was distinguished by improvements in equipment and technic of operation. Further advances in sound recording methods were noted and added realism in both sound and picture effect was attained. (*J. Soc. Mot. Pict. Eng.* 25: 3, July, 1935.) Five leading newsreel producers completed an agreement to standardize the recording volume level to approximate that used when recording feature pictures.

Considerable interest in a stereoscopic motion picture was given by Louis Lumière, one of the great pioneers of the motion picture industry. Pairs of stereoscopic pictures occupying a single frame were projected through separate color filters and viewed with spectacles of which one glass transmitted from 550 mμ to 640 mμ and the other transmitted on either side of this band. (*Camera* 13: 336, April, 1935.) The 40th anniversary of Lumière's introduction of one of the first motion picture cameras and projectors was observed with appropriate celebrations in France in November.

It is probable that the growing demand from colleges and museums for material for the study of the motion picture as a living art will be supplied in part at least by the newly endowed Museum of Modern Art in Rockefeller Center, New York City. (*Mot. Pict. Herald* 119: 15, June 29, 1935.)

Evidence of the rapidly growing conviction of the value of the motion picture as an educational medium was shown by the announced programme of Germany to equip her 60,000 schools with 16 mm. projectors within the next six years. (*Phot. Dealer* 49: 54, February, 1935.)

Photomicrographs in color by the Finley process were used as evidence to identify fragments of glass found in the jacket of an accused person in an English trial. Plans to introduce color photomicrography at Scotland Yard were also announced. (*Brit. J. Phot.* 82: 285, May 3, and 349, May 31, 1935.)

A film showing growing crystals in color won a medal at the 80th Annual Exhibition of the Royal Photographic Society (London). The pictures were photomicrographs and the photography was by the Kodachrome process. Toch has used infrared photography effectively to distinguish between original paintings by the old masters and modern copies of such paintings. The infrared pictures of the older paintings revealed characteristic brush strokes not shown by the copies. (*New York Times Mag.*, Aug. 23, 1935, pp. 10-11.) The research supplements that of Ainsworth-Mitchell and of Laurie in England (*Analyst* 59: 657, October, 1934).

Photographs were made for the first time of fuel oil burning inside a Diesel engine. Light from an electric spark (one ten millionth second) was used to illuminate the oil spray moving 800 feet per second. Pictures were made through a special glass window in the side of the combustion cham-

ber, using a camera operating at 2500 frames per second.

Other interesting applications of the motion picture camera for recording data were (1) measurement of the landing speed of Boeing transport planes (*Sci. Amer.* 152: 315, June, 1935); (2) determination of the cause of sway of electric railway car trucks by mounting an ultra-rapid camera under the car while in regular service (*Forbes* 36: 13, Oct. 1, 1935); (3) recording the finishes of horse races at Le Tremblay near Paris (*Photography* 3: 44, March, 1935) and at Santa Anita near Los Angeles (*J. Soc. Mot. Pict. Eng.* 25: 28, July, 1935). The last named equipment photographs the time of predetermined intervals of the race and also photographs the finish and the total elapsed time. In less than three minutes after the finish, an enlargement of the finishing frame can be delivered to the judges' stand.

A special 8 mm. Cine Kodak recorded the dials on the instrument panels of Sir Malcolm Campbell's racing automobile, the *Blue Bird*, when he set a world's record of over 301 miles per hour in September on the Salt Lake flats of Utah. (*Phot. J.* 65: 599, November, 1935.)

Oscillograph records were made by Jasper and Carmichael of Brown University of electrical impulses accompanying brain activity. Such records are known as "electrocephalograms," analogous to electrocardiograms of heart action. (*Science* 81: 51, Jan. 11, 1935.)

Further applications of soft x-radiation were exhibited at the Royal Photographic Society in September by the Kodak Laboratories. These consisted of examples of treatment of crepe fabrics, the weighting of silk with metals, leather and paper structures. Sets of stereo soft radiographs of small biological specimens elicited favorable comment. An improved zinc sulphide fluoroscopic screen, which was said to be free of afterglow, was described by Swindells as an improvement over the more common cadmium tungstate screen. (*X-Ray Tech.* 6: 162, April, 1935.)

In the field of photolithography, color gravure reached a high level of quality at over two times the speed of offset printing. (*Nat. Lithographer* 42: 22, March, 1935.) Richer colored postage stamps were made by the intaglio process than were producible by surface printing although maintenance of uniformity was quite difficult. (*Penrose's Ann.* 37: 95, 1935.) Murray published a detailed discussion on the relation of natural color photography to printing. (*Brit. J. Phot.* 82: 3 et seq., Jan. 4, 1935.)

Physical Measurements. The ninth meeting of the International Congress of Scientific and Applied Photography was held in Paris, July 7 to 13. Although this body has no executive power, it serves a very useful purpose among several countries for the exchange of ideas and information related to the manufacture and use of photographic materials. Discussion at the Paris meeting centred mainly around two subjects: (1) standardization of the method of measuring and evaluating speed, and (2) 16 mm. sound-on-film standards.

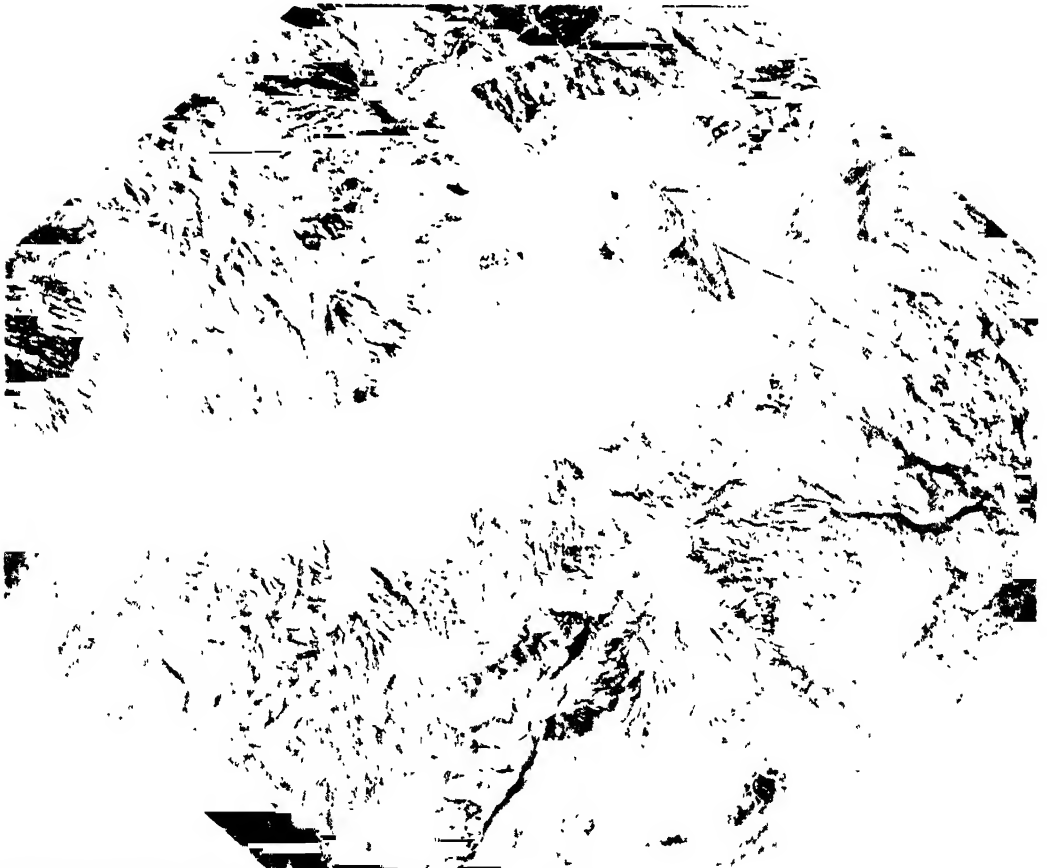
(1) Agreement had been reached on the specification of a standard light source for sensitometry at the previous Congress held in Dresden in 1931. The bulk of the discussion at the present meeting concerned several specifications given in a Standards Sheet (DIN 4512) adopted by the Germans in January, 1934. The method specified the standard light source, a $\frac{1}{250}$ second exposure (intensity scale)



Courtesy Fairchild Aviation Corp., Woodside, L. I., N. Y.

COMPOUND TEN-LENS AERIAL CAMERA

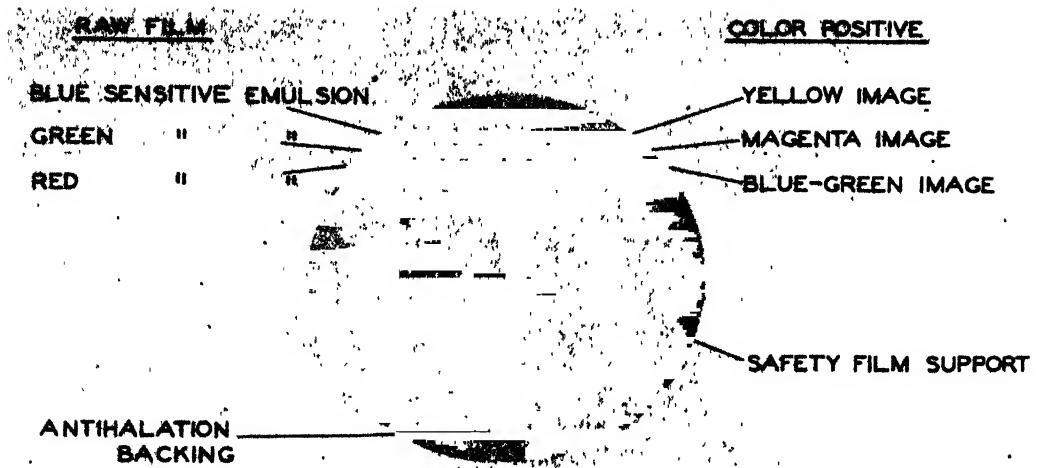
Two five-lens cameras set at 15° to each other. Ten photographs obtained at 30,000 feet combine to form an octagonal composite covering 760 square miles of ground area.



Courtesy Fairchild Aerial Surveys, Inc., Los Angeles

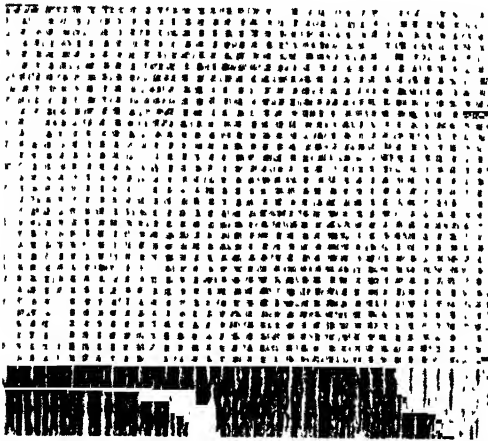
BOULDER DAM (SEMI-CIRCLE NEAR TOP) AND HUGE LAKE FORMED BY DAMMING THE COLORADO RIVER

Photographed with special 10-lens camera from 20,000 feet, August, 1935



Courtesy Eastman Kodak Co, Rochester, N Y

CROSS-SECTION OF KODACHROME FILM



Courtesy H F Sherwood, Kodak Research Laboratories, Rochester, N Y

Grenz Ray (soft X-ray) Photograph of Acetate Silk before Creping



Grenz Ray (soft X-ray) Photograph of Acetate Silk after Creping



Courtesy I. Miller Co and Eastman Kodak Co, Rochester, N Y.

Store Window Photographed with Polarizing Screen over Camera Lens to subdue Reflections



Store Window Photographed in Ordinary Way. Note Reflections from Street and Adjoining Store

and an optimal time of development to give the highest speed figure.

Delegates from 10 of the 11 countries voted against optimal development, the German delegates being the only ones favoring it. The majority felt that development should be carried out for any given material according to the instructions supplied by its manufacturer. The majority favored the method of evaluating speed somewhat as proposed by the Germans, namely, based on the exposure corresponding to a density of 0.1 above fog. Another method was also discussed extensively. This method involved the determination of the exposure necessary to produce a gradient of a fixed fraction of the maximum gradient obtainable with the material.

It was generally recognized that this latter method was ideally more satisfactory than the former, but that there had been insufficient time to test it out thoroughly. An instrument was described, however, which enabled speeds to be determined in this way with the ease of the DIN 4512 method. (*J. Opt. Soc. of Amer.* 25: 396, December, 1935.)

No final decision was reached but votes were taken on all the points concerned, with a view to providing a basis for further work and discussion, so that an internationally acceptable proposal could be adopted at the next Congress.

(2) The 16 mm. sound film situation had become complicated by the fact that the German manufacturers of equipment had fitted their factories to build apparatus which takes a film having one row of perforations arranged on the right when the film is threaded in the projector with the gelatin side away from the screen, whereas in the American standard, the film is turned around to face the other way. A misunderstanding arising from the method of drawing up the American specifications and of interpreting them caused the difficulty. At the joint meeting of the Congress and the International Standards Association (an executive body), it was decided to refer the problem to the various national committees for further consideration.

Webb, in a continuation of his work and that of Jones on reciprocity law failure in photographic exposure, showed that the effect of temperature variation upon emulsion sensitivity was very strongly dependent upon the intensity level at which the exposures were made. At very low intensities, it was found that the speeds of certain emulsions could be increased several-fold by lowering the temperature. (*J. Opt. Soc. Amer.* 25: 4, January, 1935.) At the International Congress session in Paris, Sheppard read a paper which attempted to interpret Webb's results and proposed a mechanism. (*Sci. et ind. phot.* [2] 6: 241 et seq., August, 1935.)

A description was given at the 1935 Congress of the microdensitometer used by Van Kreveld in his studies on the graininess of photographic deposits. (*Sci. et ind. phot.* [2] 6: 271, August, 1935.) Keck reported on a continuation of Van Kreveld's work (*Phot. J.* 75: 521, September, 1935.)

Davies and Owen described a visual photometer with which both accurate transmission and reflection densities can be measured. A visual as well as a photoelectric method of calibrating the instrument had been evolved. (*Phot. J.* 75: 128, March, 1935.)

Eyles and Selwyn devised an apparatus for obtaining the curves relating area with time in photographic between-the-lens shutters. A set of separated and illuminated apertures fitted with neutral

glass filters passing certain standard fractions of the light is imaged by a lens on a film wrapped around a revolving drum, the shutter acting as a diaphragm for the lens. One exposure is made with the shutter open and one without the filters and the points are found at which adjacent bands have similar densities. (*Proc. Phys. Soc.* 47: 446, May, 1935.)

The principal factors affecting the reliability of measurement in photographic photometry of Roentgen rays were discussed by Wilsey. (*Amer. J. of Roentgenology and Radium Therapy* 32: 789, January, 1935.)

Sensitized Materials, MANUFACTURE OF. The question occasionally arises as to how long images on film will last. This subject is of especial interest to libraries and archives who are recording many records on film. Bendikson attempted to answer the question by examining one of the French microscopic dispatches prepared in 1870 by M. Dagron. Sections of these were enlarged 32 times linearly and showed an excellent stage of preservation although the original was over 64 years old. It was concluded from this examination that if reproductions are made with the proper care and preserved adequately, they should still be useful after the year 2000. (*Library J.* 60: 143, Feb. 15, 1935.)

An improved method of optical sensitizing of emulsions consisted in dyeing the silver bromide (free of a carrier) and then dispersing it in the gelatin by ultrasonic vibrations. This method is claimed to result in much less dye being absorbed by the gelatin than when the usual methods of desensitizing are employed. (*Z. tech. Physik* 16: 109, 1935.) Improvements in emulsion making technique were described by Fuchs, including control of grain size by addition of crystallization inhibitors, easier control of physical hardeners by adding di-aldehydes, and the addition of fog-clearing secondary and tertiary aromatic amines. (*Phot. Ind.* 33: 191, Feb. 27, 1935.) Steigmann discussed the effect in emulsions of ripening-restraining substances in the gelatin. (*Sci. ind. phot.* [2] 6: 1, January, 1935.)

Several Russian investigators reported on further studies related to photographic emulsions. Subjects discussed included: (a) influence of acid substrata on the photographic properties, wherein it was shown that the desensitizing effect is proportional to the molecular concentration of acid retained in the substrata; (b) effect of pH on hypersensitization with ammonia and various buffer solutions; (c) influence of replacements of groupings in the thiocyanine dyes on their usefulness as optical sensitizers. (*Photo-Kino Chem. Ind.* No. 1-2, 1935.)

Brooker and his co-workers, Keyes and White, discussed methods of preparing carbocyanine dyes which have permitted sensitizing of photographic plates far into the infrared spectral region (*J. Franklin Inst.* 219: 255, March, 1935, and *J. Amer. Chem. Soc.* 57: 547, March, 1935.) Results obtained with the extreme infrared sensitive Type I-Z plate were described by the U.S. Bureau of Standards in their studies on spectra of noble gases to 13,000 Å, (Research Paper 781, U.S. Bureau Standards, 1935) and by Mt. Wilson Observatory in their solar spectra investigations. Lines between wavelengths 12,800 and 13,536 were recorded after 11 hours exposure. (*Catalogue Roy. Phot. Soc. 80th Annual Exhib.*, p. 35, 1935.)

Several of the new sensitive materials announced were (a) a motion picture negative film having a speed about 90 per cent faster than previous high

speed panchromatic materials and of the same color sensitivity and fineness of grain (*Amer. Cinemat. 16*: 186, May, 1935); (b) an improved color screen film of German origin (*Camera*, Dublin, 14: 633, July, 1935); (c) a color roll film in several amateur camera sizes as well as 16 mm. cine rolls (*Amat. Phot. and Cinemat. 80*: 191, Aug. 21, 1935) and infrared roll films for amateur cameras using 35 mm. film (*Brit. J. Phot. 82*: 18, June 2, 1935).

Great progress for the years 1934 and 1935 was reported in the establishment of a photographic industry in the Soviet Union. (*Photo-Kino Chem. Ind.* No. 1-2, 1935, and *Soviet Kino Photo Ind.* No. 1, 1935.)

Apparatus. New. The introduction of an efficient plane polarizing sheet material in sizes large enough to cover lenses and lights greatly simplified the use of polarized light in photography. By covering the lens with the screen, unusual sky effects may be obtained, photographs obliquely made through glass and water are free of reflections, and other surfaces may be photographed obliquely to reveal surface details. Complete control of gloss is possible, when the sheet material is used both over the illuminant and the lens. (*J. Soc. Mot. Pict. Eng. 25*: 69, July, 1935.) The polarizing sheet is the invention of Edwin H. Land and several examples of its use were awarded the Hood Medal at the 80th Annual Exhibition of the Royal Photographic Society.

An improved type of photoflash lamp was equipped with a warning mark, a cobalt salt which changed from blue to pink if there was a danger of the lamp shattering during ignition. (*Focus 22*: 6, Mar. 16, 1935.)

A new apparatus for aerial photography and mapping was equipped with a moving band of paper on which are sketched the contours of objects photographed. (*Brit. J. Phot. 82*: 62, Jan. 25, 1935.)

Several new models of amateur cine cameras were announced for use with 8 mm., 9.5 mm., and 16 mm. films. (*Phot. Dealer 48*: 480, December, 1934; *Amer. Cinemat. 16*: 270, June, 1935; *Film fur Alle 9*: 209, July, 1935.) A 16 mm. camera designed in Vienna incorporated an automatic exposure meter of the selenium type coupled with the camera lens diaphragm. (*Brit. J. Phot. 82*: 468, July 26, 1935.)

As a result of the two sound-on-film standards for 16 mm. projectors (the DIN and the S.M.P.E.) at least one make was known to have been designed so as to take either type of film. (*Brit. J. Phot. 81*: 719, Nov. 30, 1934.) See under *Physical Measurements*.

For color photography of still subjects and certain types of moving subjects, repeating backs may be used for making the three separation negatives. One type was described which was claimed to permit the three exposures to be completed in a total time of $\frac{1}{6}$ second. (*Bull. soc. franc. phot. 22*: 121, May, 1935.) A new practical one-exposure commercial color camera was announced by a British firm. (*Brit. J. Phot. 82*: 587, Sept. 13, 1935.) The Technicolor trichrome camera used a beam splitter to give the green negative on a single film and the blue (front) and red (back) negatives on a bi-pack. (*Amer. Cinemat. 16*: 18, Jan. 1935.)

An enlarger of revolutionary design was announced for use in printing from miniature negatives. A negative carrier on a table is illuminated from below and the image projected onto the paper held in a frame about one foot above the table top. A reflected image of the enlarged negative image

is visible to the operator at all times. (*Developments 10*: 4, August, 1935.)

The trend in methods of printing 16 mm. photographic sound records from 35 mm. film favored optical printing rather than by re-recording. Two types of optical printers for this type of work had many useful features. (*J. Soc. Mot. Pict. Eng. 25*: 117, August, 1935; *Movie Makers 10*: 473, November, 1935.)

An instrument known as an "argentometer" was described which permitted rapid measurement of the silver content of a used fixing bath. The action of the device depended on the change of transparency of a solution containing silver and hypo after the addition of sodium sulphide and certain other chemicals. (*J. Soc. Mot. Pict. Eng. 25*: 335, October, 1935.) Ives described a special type of roller developing rack with which continuous machine developing conditions could be simulated in a rack and tank system. (*J. Soc. Mot. Pict. Eng. 24*: 261, March, 1935.)

Photographic Process. THE. Comparatively little is known about the chemistry of development apart from ferrous oxalate development, but it is encouraging to note the publication of more data each year on this important subject. The oxidation of ordinary alkaline sulphite developers containing several different developing agents was studied by Lehmann and Tausch, who found that stages in the formation of mono-, di-, and probably higher sulphonates were clearly marked in the case of aerial oxidation because of the intermediate formation of hydrogen peroxide. Metol monosulphuric acid was isolated and found to be a developing agent which may be useful for fine grain development. (*Phot. Korr. 71*: 17, February, 1935.)

The ability of p-phenylenediamine to develop images of low graininess was found experimentally by Jacobsohn to be a function of its low developing energy. (*Phot. Ind. 32*: 1242, Nov. 21, 1934.)

A new fine grain developer was announced by Vittum and Crabtree who claimed it to be capable of producing images equally as fine and with about the same speed loss as those obtained with paraphenylenediamine developers without added alkali. A faster development rate, and freedom from stain and toxicity compared with paraphenylenediamine were also claimed as advantages. The nature of the developer was not revealed. (*Camera Craft 42*: 587, December, 1935.)

Development was shown by Faerman and Shishkina to be independent of the specific nature of the alkali provided the pH remains the same. The acidity of developers was found to be one of the factors controlling the oxidation-reduction potential. (*Photo-Kino Chem. Ind.* No. 1-2, 30, 1935.) Seyewetz and Szymson gave data on the quantity of bromide reduced by various developing agents as a function of the ratio of alkali to reducing agent. (*Bull. soc. franc. Phot. 21*: 250, December, 1934.)

Weyde gave data on the exhaustion life of a paper fixing bath (20 per cent hypo) as three hundred 9 by 12 cm prints per liter and about the same number for a 2 per cent acetic acid rinse bath. (*Brit. J. Phot. 82*: 326, May 24, 1935.)

Photographic Theory. Factors in photographic sensitivity were discussed by Sheppard under the headings of (1) intrinsic properties such as grain size, nucleation, optical sensitizing, layer thickness, etc., and (2) extrinsic factors including intensity level of illumination, temperature, and humidity. (*J. Soc. Mot. Pict. Eng. 24*: 500, June, 1935.)

Weigert published a summation of his investiga-

tions relating to the micelle theory of the latent image in which he claimed that it explains the sensitivity spectrum, the Herschel and Schwarzschild effects, desensitization by dyes, and physical development. (*Phot. Korr., Suppl. Beilage No. 6* 70: 41, November, 1934.)

Reinders and Dingemans studied the rate of oxidation of hydroquinone with atmospheric oxygen and found it to be proportional to the hydroquinone concentration, oxygen pressure and the square of the hydroxyl concentration. The unstable hydroxyquinone is formed as the primary reaction product. (*Rec. trav. chim.* 53: 209, 231, and 239, 1935.)

It was shown possible by Kellner and Bennewitz to develop photographic papers on electrodes of silver, zinc, and mercury. Formation and diffusion of atomic hydrogen which reduces the exposed areas faster than the unexposed was considered the effective process. (*Z. wiss. Phot.* 33: 212, 225, 1935.)

Arens observed the significant fact that solarization is shown only very feebly on physical development after strong intensity-scale exposure whereas it appeared after a time-scale exposure and with either chemical or physical development (*Z. wiss. Phot.* 33: 281, 1935.)

A comprehensive and suggestive paper on the chemistry of organic sensitizers, desensitizers, and developers was presented at the Congress of Photography by Kendall. At this same meeting, Chibisoff gave a valuable paper on the ripening of photographic emulsions. (*Sci. et Ind. Phot.* [2] 6: 248 and 290, August and September, 1935.)

Bibliography. Accounts of photographic progress are published each year by the *British Journal of Photography* (London) and the *Society of Chemical Industry* (London). Cinematographic progress is reviewed annually by the *Society of Motion Picture Engineers* (New York). New apparatus is described in the *British Journal of Photography* (London), *Deutscher Kamera Almanach* (Berlin), *Photofreund Jahrbuch* (Berlin), and *Jahrbuch des Kineamaturs* (Berlin).

The first number of the *Journal of the Motion Picture Society of India* made its appearance as the official publication of that society. The *Home Photographer and Snapshots* (London) initiated by George Newnes, Ltd. in 1933 was continued. The official publication of the *Miniature Camera Club of New York*, *The Miniature Camera*, was withdrawn.

The more notable books of the year were

The Photography of Colored Objects 13th ed revised (Eastman Kodak Co., Rochester); M. C. F. Beukers, *Fotografische Ontwikkelings*, (Waltham, Jr., Delft); L. J. Hibbert, *A Manual of Photographic Technique*, (Pitman & Sons, London); T. T. Baker, *The Kingdom of the Camera*, (Bell & Sons, London); W. M. Strong, *Photography for Fun*, (The Maple Press, New York); A. Adams, *Making a Photograph*, (Studio Publications, Inc., New York); J. M. Blair, *Practical and Theoretical Photography*, 2nd ed. (Mimeographed at the University of Colorado, Boulder, Colo.); W. D. Morgan and H. M. Lester, *The Leica Manual*, (Morgan & Lester, New York); G. Potonié, *History of the Discovery of Photography*, trans by E. Epstein, (Walker Engraving Corp., New York); F. R. Fraprie, *The Secret of Exposure*, (American Photographic Publishing Co., Boston); F. I. Jordan, *Photographic Enlarging*, (Folmer-Graflex Corp., Rochester); F. R. Fraprie and A. Hammond, *How to Make Enlargements*, (American Photographic Publishing Co., Boston); W. Mortenson, *Pictorial Lighting*, (Camera Craft Publishing Co., San Francisco); P. Lullack, *Bastelblätter und Bauanleitungen zur Fotoarbeit*, (Knapp, Halle); O. Nordhardt, *Photogerät selbst basteln*, (Hochmeister & Thol, Leipzig); D. C. Ottley, *The Cine Amateur's Workshop*, (Routledge & Sons, London); A. L. Gale and R. C. Holslag, *Making Better Movies*, revised ed., (Amateur Cinema League, New York); G. P. Kendall, *Film Tinting*, (Newnes, Ltd., London); J. H. Reyner, *Cine Photography for Amateurs*, 2nd ed., (Chapman and Hall, London); W. Kross, *Der Film für Alles*, Das Fotografieren mit Panchro, (Knapp, Halle); P. W. Harris, *Home Processing*, (Newnes, Ltd., London); D. C. Ottley, *Making Home Movies*, (Newnes, Ltd., London); D. C. Ottley, *Practical Set Structure for the Amateur Cinematographer*, (Pitman and Son, London); J. R. Cameron, *Sound Motion Pictures* (Cameron

Publishing Co., Woodmont, Conn.); V. I. Pudovkin, *Film Acting*, trans. from the Russian by I. Montagu, (Newnes, Ltd., London); J. S. Mertle, *Process Photography and Plate Making*, (Cramer Dry Plate Co., St. Louis); L. P. Clerc, *L'Industrie des Produits Photographiques*, (Gauthier-Villars, Paris); H. Bouasse, *Optique et Photométrie dites Géométriques*, (Librairie Delagrave, Paris); T. A. Wilson, *The Practice of Collotype*, (American Photographic Publishing Co., Boston); A. W. Judge, *Stereoscopic Photography*, 2nd ed., (Chapman & Hall, London); C. F. Lan-Davis, *Telephotography*, 4th ed., by H. A. Carter, (Pitman & Sons, London); A. Charriou, *Etude de la Sensibilisation chromatique et de la Desensibilisation des émulsions photographiques*, (Gauthier-Villars, Paris); *Photomicrography*, 13th ed., (Eastman Kodak Co., Rochester); R. Russ, *Handbuch der Modernen Reproduktionstechnik*, vol. II, *Chemigraphie*, (Klmsch & Co., Frankfurt am Main); H. Sporr, *Photographisches Rezeptbuch*, 7th ed., (Knapp, Halle); *Practical Photography and Amateur Cinematography*, vols. I-III, edited by E. Malloy, (Newnes, Ltd., London).

A partial list of the handbooks and annuals appearing during the year is as follows: *Agfa-Veroeffentlichungen des wissenschaftlichen Zentral-Laboratoriums—Der Photographischen Abteilungen*, vol. IV, (Hirzel, Leipzig); *American Annual of Photography*, 1936, vol. I, (American Photographic Publishing Co., Boston); *Photofreund Jahrbuch*, (Photokino Verlag, Berlin); *British Journal Almanac*, (Greenwood, London); *Deutscher Kamera Almanach*, (Union Deutsche Verlag, Berlin); *Jahrbuch des Kineamaturs*, (Photokino Verlag, Berlin); *U. S. Camera*, (Morrow & Co., New York); *Kinematographic Year Book*, (Kinematograph Publications, Ltd., London); *Film Daily Year Book of Motion Pictures* (Film Daily, New York); *Motion Picture Almanac*, (Quigley Publications, New York); *Penrose's Annual*, (Lund Humphries & Co., London); *Klmsch's Jahrbuch*, (Klmsch & Co., Frankfurt a/Main).

PHYSICAL ANTHROPOLOGY. See ANTHROPOLOGY.

PHYSICS. The year 1935 was notable for progress in cosmic ray research. The upper air is now a cosmic ray laboratory from which continuous automatic observations come by radio to the earth for record and study. The great achievement, however, is experimental proof cited by Rutherford, for the first time, that mass and energy are interconvertible. For this 1935 marks an era in physics. The technique of transmutation engages worldwide research and its successes in rapid sequence are realizing the age-old dream of alchemy. More noteworthy still is the fact that such transformations release energies vast compared with the infinitesimal magnitude of the atoms in which they occur. This achievement may prove to be unequalled in human history as a contribution to human welfare.

Air. The air is now an active field of discovery as affected by radiation including gamma, ultraviolet, and cosmic rays and particles. Electrons are concentrated at 60 to 90 miles and 125 to 150 miles. Knowing their velocity, the height which they would reach can be measured. Stetson is studying the electron tides caused by the moon.

Gowan found at 25 miles up there should begin a rise in temperature. Records show that the upper polar atmosphere is warmer than that over the equator. The warmth of the upper air is caused by absorption in oxygen and ozone, oxygen being more effective in lower parts. Ozone absorbs ultraviolet. If the air were of uniform density, it would form a layer five miles deep. If oxygen were separated likewise, it would form a layer one mile deep, the ozone would form a layer three millimeters deep on the average.

The upper air has attracted many investigators. Russian sounding balloons have ascended 25 miles. Sounding balloons in the stratosphere may be equipped for sending back to the earth meteorological data by radio. The results show that such automatic devices may gather all essential data without the risk attending manned flights. The diving bell so successful in deep sea exploration was quickly

followed by the "bubble gondola" for stratosphere flight. The success of Romano and Beebe was duplicated by Piccard and others. Stevens and Anderson in a record flight with *Explorer II*—a balloon of record size—reached an altitude of 72,395 feet. Scientific preparations were unsurpassed and were completely successful.

Tuве and Wulf plan the study of the upper atmosphere by using light beams reflected from the stratosphere. The reflected beam is identified simply by initial "modulation"—rapid interruption at the sending source. The study will cover atmospheric density, high clouds, fluorescence, and other phenomena.

Rocket. Erickson devised a new type of rocket engine propelling the rocket by intermittent acceleration. Compressed air produced by the rocket's speed mixes with fuel to form the explosive mixture. Goddard is busy on his daring project, a "space-rocket." Suggestive of the first Wright starting frame, Goddard's new tower was used to give his rocket an altitude of 7500 feet at a maximum speed of 700 miles an hour, the greatest rocket speed ever attained. Korneyev has devised a stratosphere rocket with an estimated ceiling of 40 miles and a speed of 2100 feet per second.

Radio. Among the triumphs of applied physics must be listed the design, production, and sale of five million radio receiving sets. Armstrong devised a new ultrashort wave frequency modulation to eliminate static and tube noises. Even nearby lightning does not mar reception; facsimile print was transmitted simultaneously with the same wave length as music. Langer explains Jansky's puzzling extra-terrestrial radio pulses from a definite point in space. He states that interstar dust—electrified by interstellar radiation—sends out a wave from each particle. Dellinger discovered a temporary but complete fading out of high frequency radio signals at long distance, which may correlate with intervals twice the time of the solar revolution, that is, once every 54 days. He found also that every fade-out appears to be correlated with an observable change in the sun.

Electron Optics. Zworykin devised a new telescope focusing electron rays as the eye focuses light. A special feature of the electron telescope is that its images have no spherical aberration. The Zworykin and Morton electron telescope makes infrared and ultraviolet visible. Electron optics is extending the use of electrons to many visual arts. We may perhaps expect of electron optics applications as numerous as those of light waves.

Another new device by Zworykin—the electron multiplier—has many important applications. Bombarded with high speed electrons, it emits a current far greater than the exciting stimulus. With cesiated silver this gain in current is a million times greater than the initial current.

Morton describes the electron optics of electron microscopy with special reference to biology. Cell structures were studied as magnified one thousand times. Hanneberg also discusses the electron microscope assuming that the electrons are of de Broglie wave length.

Stockberger grew lithium fluoride in large clear crystals for lens making. LiF is the best known transmitter of ultraviolet light. At the Boyce Thompson laboratory the new sodium vapor lamp was found the most effective in accelerating the growth of plants.

Progress is being made on an important fundamental principle that specific frequencies dominate

specific applications of light to control inorganic and organic matter and organisms. An example in biophysics is reported by Bachem as to wave length used in radiation therapy specific for particular tissue; 3.5 meter waves were most effective on fat, inducing heat; 5 meter waves heated the liver and hair most effectively; 7 meter waves were the most effective on bone and marrow.

Matter and Materials. Von Grosse isolated protoactinium, element no. 91, rarer than radium in pitchblende. Unhappily during an experiment his specimen—the entire "world's supply"—of protoactinium disappeared and von Grosse is now extracting a new specimen.

Van Vleck discusses the quantum theory of valence: (1) molecular orbits; (2) homo-polar method, finding that neither is dependable except when both agree. Both predict a nearly right-angled model for water and a tetrahedral one for methane. The molecular orbit method seems to have the better computational value.

Bridgman continues his revealing experiments on high pressure. His latest progress was to increase high available pressure from 12,000 to 50,000 atmospheres. Such pressure transforms the properties of materials in new and astonishing ways. Rubber and paper lose their elasticity and become translucent and horny. Red phosphorus is made black, the electric resistance of some metals is increased and brom-thymol—ordinarily soluble—becomes insoluble under the superpressures.

Sound. A recent acoustical achievement is a sound record film nine inches wide carrying a complete symphony score of about a hundred musical instruments. Each separate sound track was first produced by a master musician with a perfect instrument and carried only the music range of one instrument.

Volnov, Avranov, and Yanovski have created synthetic music from repeated cut-outs, each having a wave form. At their studios at Potylikha in Moscow has been produced ingenious music repeating the graphic curves of stock quotations and even profiles of the human face have yielded synthetic music. This recalls the face profile drawn by Michelson with his harmonic synthesizer based on a Fourier series.

In telephony one sound in a word may have one-thousandth the volume of the sound next following. Weak sounds were lost in static and strong sounds overloaded the amplifiers. In transatlantic radio telephony, the Bell laboratories new "Componder" transmitter system (compressor and expander) automatically reduces the stronger sounds and strengthens the weaker. At the receiver the sounds are automatically restored to normal, 15 decibels.

Knudsen found that in oxygen with humidity 20 per cent the high notes of the violin and piccolo could not be heard 50 yards away. Laboratory measurements show that a motor requires from 0.1 to 1.0 watts of energy; an orchestra of 75 pieces 0.5 watt rising to 50 in heavy passages. The human voice 10 microwatts, increasing to a milliwatt when shouting.

Cosmology. Einstein and Rosen announce an approach to a new theory designed to link relativity and the quantum theory. Sulaiman's relativity assumed that gravitation is propagated with finite velocity by small particles, gravitons not affected by gravitation but having momentum. The theory gives an explanation of the perihelion defect of the planet Mercury and the deflection of sunlight.

Haas computed the number of particles in the universe to be 1.2×10^{79} and the radius of space to be 93×10^{27} cm. Japolsky regards elementary particles as whirls in free space on the classical basis that their stability rests on relativity and quantum and wave mechanics. Electrons and protons are described as electropolarized whirls; and positrons and light quanta as magneto-polarized. Contra-polarized whirls cause gravitation. He finds the theory agrees with Maxwell's equations.

Subatomic Particles. Heisenberg assumed a strong mutual attraction of neutron for proton as a basic fact. Classical electrostatics creates a barrier, beginning at the edge of the nucleus. Bainbridge finds new evidence for the neutrino (Fermi's theoretical massless particles without charge). He finds the neutrino concept helps explain the atomic isobaric weights, 115 of indium and tin; 123 for antimony and tellurium; and 113 for cadmium and indium. Monad-Harzen summarized the subject of neutrons citing 288 articles.

Yeh found that neutrons and protons form layers in the atomic nucleus. Ellasser suggested that an electron is a vortex ring of radius $h/2\pi = mc$ in which the electron charge circles with the speed of light giving a magnetic moment of 1 Bohr magneton, accounting for the spin. Attraction or repulsion results as their spins are parallel or antiparallel.

Radioactivity. An intense search for ways to make matter radioactive is under way. Sodium is a successful example. With suitable bombarding technique, sodium may be made radioactive and the treatment equivalent of radium will be greatly cheapened by the so-called "radioactive table salt" which gives the power of radium treatment for one day.

Bombardment of nuclei, chiefly with light atoms, requires high voltages. Seventeen installations of Lawrence cyclotrons are reported capable of producing rays of 15 million electron volts with which to bombard atomic nuclei for transmutations and to produce artificially radioactive material.

Perrin found the cross section of light atoms for capturing neutrons to be inversely as their velocity. The cross section of a neutron of average thermal agitation proved to be 10^{-20} cm². The transformation of lithium by a million-volt proton liberates 17 million volts in transforming each atom—850 times the energy imparted to it. But only one proton in 10^8 makes a hit. The use of the chargeless neutron offers a new hope as an efficient bombarding particle.

Lauritzen and colleagues produced gamma rays with six times the energy (penetration) of natural radioactivity by using an artificial source of gamma rays of 16 million electron volts. Joliot and Joliot surveyed nuclear reactions and gave results of bombarding Al, B, Hg, with Po particles. Tests appear to confirm the view that the active nuclei resulting are unstable isotopes. Curie, Helban, and Preiswick produced a radium isotope by the reaction: $\text{Th}_{90}^{232} + n_0^1 = \text{Ac}_{88}^{229} + \text{He}_2^4$. This radium isotope yielded radioactive elements once regarded as actinium isotopes.

Transmutation. The age-old dream of alchemy, transmutation, has become a realized modern art. Aston and others now predict the synthesis of any element. He reports an accuracy of one part in 100,000. During the year Aston announced the discovery of 20 new isotopes, making the total known 247 and reporting that 72 elements have isotopes. To produce 10 drops of triple hydrogen

required a concentration from 75 tons of water.

The transmutation of lithium into Be (the lightest metal) was achieved by Lauritzen with 17 million volt-rays, eight times more powerful than any gamma ray from radium (2 million volts). Electron rays evoked by the change from lithium 7 to lithium 8 disclosed that lithium 8 is a new radioactive substance. Proton bombardment of lithium 7 changed it into Be 9. Lithium 6 produced artificially was found to be 10 per cent lighter when pure, whereas lithium 7 was 10 per cent heavier. Zipprich, studying the disintegration of Be with 50 kv protons, obtained a yield of 6.6 range alpha particles, equal to the yield from lithium.

Nuclear Transmutations. Fleishmann and Bothe summarized the recent astonishing progress in nuclear transformations by gamma and particle rays; production of deutons; disintegration by resonance; disintegration without capture; and disintegration with heavy nuclei and cosmic rays. They also covered branching transformation; multiple disintegration of same nucleus; formation of isotopes; artificial radioactivity induced by helium nuclei, deutons, protons, and neutrons; as well as neutrons from artificially radioactive materials; energy distribution, and electrons and positrons emitted; separation of radioactive isotopes, absorption and velocity of slow electrons; theory of interaction of nuclei and neutrons, gamma rays produced by helium nuclei, protons, and deuteron bombardment; nuclei of He^3 , Be^8 , elements 93 and 94 and radioactive series $4n+1$; nature of neutron, positron, neutrino, and negative proton; a summary of known nuclear reactions, characteristic of the nuclei of artificially radioactive atoms, accurate measures of light atoms. This excellent summary was accompanied by a bibliography comprising 272 titles.

Cosmic Rays. Cosmic rays bring to earth an amount of energy equal to 0.001 that of starlight and 10^{-9} that of sunlight. Once regarded as photons they are now known to be particles. In a magnetic or electric field positive rays curve in paths opposite to those of negative rays, whereas neutral rays pass undeflected. Anderson found a curve of an 18,000,000 volt electron and later the curve of a "positron." The energy required to bend the charged particles measures the so-called "magnetic rigidity." Geomagnetic bending forces start curving the rays hundreds of miles away in space. Much can be learned from the angles from which rays of particular rigidity—for example, a 10,000,000 volt positive electron—can reach the observer.

Swann and Compton suggested that sunspots on far distant suns are the source of cosmic rays. Branhill predicted that we may tap new sources of vast energy when we learn how to control processes evoked by cosmic rays. Johnson holds that negatively charged dust clouds over a star's surface attract positively charged atomic ions and project them into space like the beam of a cathode tube. He concludes that cosmic rays have equal intensity in intergalactic space as in our own galaxy. Hence such energy exceeds that of starlight—a conclusion, if true, of great importance.

Compton holds that because of the vast distances of the point of origin of cosmic rays and that since the earth's motion and that of the Milky Way are involved, those rays may yield data as to astronomical motions. It appears that high energy electrons have a radiation defect compared with electrical theory. Up to 70 million electron volts

they follow classical prediction, above this the electron departs from prediction. When electrodynamic theory is extended to the strongest fields, the cosmic rays may be one of the few means of adequate test. Thousands of photographs of cosmic ray explosions showed that many of the tracks were due to a heavy particle, having more energy than the nucleus could yield. Some of the incoming cosmic ray energies must be absorbed by the exploding fragments.

We may recall that cosmic rays disclosed the positive electron; that cosmic ray distribution threw light on the earth's magnetic field; that they are used as atomic bullets with thousands of times the penetration of man-made projectiles; that they disclose defects in electrodynamic theory; that they may affect life and death since thirty cosmic rays per second pass through the human body.

Compton's new word for lines of equal cosmic ray intensity is "Isocosms"—lines of equal geomagnetic intensity. He holds that 500 miles in space 99 per cent of cosmic radiation is electric particles, 1 per cent being photons or particles. The strongest cosmic rays can penetrate nearly 300 feet of solid lead. Occasional bursts show energies as high as 600 billion volts.

An event of the year was "Science Week" at St. Louis. Three thousand scientists attended to hear of a thousand research achievements. Outstanding were papers by Thorndyke on "Science and Values"; by Taylor "The Electric Eye and the Human Eye"; by Moulton "The Scientific Method in the Investigation of Economic Problems." Knudsen (prize winner of last year) reported on "The Absorption of Sound in Gases" and Zworykin on "Electro-optical Systems," and their applications.

Significant was the meeting of the National Advisory Council on Applied Physics at Pittsburgh to discuss means to promote the use of physics in industry. The aim is to shorten the time spread between discoveries in physics and their applications to daily life.

Nobel prizes were awarded to James Chadwick for his discovery and interpretation of the neutron and to J. Joliot and Irene Curie Joliot for first producing artificial-radioactivity.

Mass and Energy. Recent discoveries confirm Hasenohrl as to the fundamental relation between mass and energy—as mass appears, energy disappears and vice versa. The energy corresponding to mass 1 is 930 million volts and as stated by Rutherford 0.001 difference in mass is slightly less than a million volts. The positive electron coalesces with the negative electron and the mass changes to radiation corresponding to a million volts. Radiation required for this theory has been observed in two quanta simultaneously emitted in opposite directions. Rutherford reports that "under certain conditions pairs of electrons, positive and negative, are produced by the action of high frequency gamma rays." He states that this is the first time that evidence has been found that matter may be created by radiation. For the first time the change of energy into matter and matter into energy has had experimental support.

Bibliography. The year brought notable books. Jaffe's *Outposts of Science* recounts a scientific pilgrimage to the famous laboratories where research in physics is in progress, including radiation, matter, astrophysics, weather, and the galaxies. Readable, dependable, it adds one more to the annals of hero days of modern science.

Serious students of sound will find welcome re-

lief in reading Miller's *Anecdotal History of the Science of Sound* from the days of Pythagoras to the inception of the Acoustical Society of America.

Controlled Quantitative Investigation is the theme of *The Development of Physical Thought in America* by Loeb and Adams.

Compton and Allison in their book *X-rays in Theory and Experiment* make the daring claim "Perhaps no single field of investigation has contributed more to our knowledge of atomic structure than has the study of X-rays."

Quantum Mechanics by Dirac is the work of a master in a speculative field of physics. Millikan's *Electrons (+ and -)*, *Protons, Photons, Neutrons, and Cosmic Rays* is the ripe crop from a life of research. Others were Gale: *The Diffraction Grating*; Compton (A. H.): *Recent Developments in Cosmic Rays*; Condon and Shortley: *Theory of Atomic Spectra*; McCrea: *Relativity Physics*; International Conference vol. i, *Nuclear Physics*; Renney: *The Quantum Theory of Valence*; Richmond: *The Dilemma of Modern Physics—Waves or Particles?*; Watson: *Sound*; Stephenson: *Exploring into Physics*.

PHYSIOLOGY. See BOTANY.

"PICTURE BOOKS." See LITERATURE, ENGLISH AND AMERICAN.

PILSUDSKI, pīl-soō'tskē, JOSEF CLEMENS. A Polish general and administrator who died at Warsaw, Poland, May 12, 1935. He was born at Zulow in the District of Wilno, Russia, Dec. 5, 1867, of Lithuanian parents, and was educated at the Gymnasium at Wilno, and, later, at the medical school of the University of Kharkov, from which he was expelled for participating in revolutionary activities. He then returned to Wilno where he joined a half-Socialist and half-Nationalist Society of Young Poles, which organization was involved in a plot to assassinate the Czar Alexander III. Although supposed to have been proved innocent Pilsudski was sentenced to five years' penal service in Eastern Siberia.

Upon his return to Poland in 1892, he became one of the leaders of the Polish Socialist Party (P.S.P.). Two years later he founded the *Robotnik* (*The Workman*), a paper of radical tendencies. In 1896, together with Ignace Moscicki and Ignace Daszynski, he represented the Polish Socialists at the Socialist International convention in London. During this period of his life, 1894-1900, he was the beloved of the working classes and the intelligentsia, for "the tenacity of his convictions, for his fearlessness, and for his iron will."

Arrested by the Russian Government at the secret offices of *Robotnik* in Lodz in May, 1900, he was thrown into the dreaded tenth pavilion of the Warsaw Citadel, from which it was said no prisoner ever escaped. Feigning insanity, he was transferred to St. Nicholas Hospital in St. Petersburg, from which he escaped by means of a forged medical certificate issued by a Polish doctor. In 1902, he returned from London, whence he had fled, to Kharkov, now under more liberal Austrian rule.

At the time of the Russo-Japanese War, Pilsudski tried to interest the Japanese Government in a Polish insurrection but failed. During the Russian Revolution of 1905-06, he organized bands of armed volunteers in order to start an uprising, but was unsuccessful. It was now that he began to put into being his dream of a private Polish army, and he began his activities among the refugees from the Russian provinces. An officers' school was established at Lwow and branches of sharpshooters

(Strzelec) formed throughout Galicia. At the outbreak of the World War in 1914, his 10,000 troops were incorporated into two legions and offered to Austria. Upon the evacuation of Warsaw by the Russians, Pilsudski started work for an independent Poland.

In September, 1916, he resigned his command of the Polish Army as a protest against the interference of German and Austrian authorities in Polish territory. On Nov. 16, 1916, the Central Powers recognized Russian Poland as a separate nation, and offered Pilsudski the position of head of the Military Commission, which he accepted. Within a short time he formed the semi-secret Polish Military Society, *Polska Organizacja Wojskowa* ("P.O.W."), which spread throughout the country.

In July, 1917, because of the refusal of his legions to take the oath of "fraternity of arms with Germany and Austria," Pilsudski was imprisoned in the fortress of Magdeburg, where he remained until 1918 when released by the German revolutionary forces. On November 4 of that year, he arrived in Warsaw and aided by the Polish Military Society, completed the disarmament of the armies of occupation. He was now vested with dictatorial powers, for the Regency Council established by the Germans resigned in his favor, and all the military organizations submitted to him. He was unanimously elected chief of state and generalissimo of the Polish Army which in 1920 proclaimed him first Marshal of Poland. In 1919, he was elected Provisional President. As commander-in-chief of the Army he directed the fighting of 1919-20 with the Lithuanians, the Ukrainians under General Petlura, and the Bolsheviks. These struggles resulted in the incorporation of the Wilno (Vilna) region and Eastern Galicia in the new Polish state and the repulse of the Bolshevik invasion at the gates of Warsaw in August, 1920.

Pilsudski's work for Poland temporarily ended in 1922, for the Polish Constitution, accepted by Parliament in 1921, gave the President very little power and curtailed his military functions to those of a titular commander-in-chief debarred from leading the army in war. He did not stand for reelection, but retired to private life, where he devoted himself to literary work, writing a number of historical books, of which the best known is *Rok 1920 (The Year 1920)* (1925), an account of his Bolshevik campaign.

Although in retirement, Pilsudski retained his active interest in political affairs. He continued to insist that the safety of Poland depended upon the complete independence of the commander-in-chief of the army from political control, in peace as well as in war. With the formation of the Witos Cabinet on May 10, 1926, it was rumored that Pilsudski's Nationalist opponents were about to triumph and that the head of the armed forces would be made subordinate to the Minister of War. On May 12 Pilsudski suddenly assembled a body of troops and marched into Warsaw. The Witos Government, which proclaimed him a rebel, was ousted after two days of heavy street fighting.

A cabinet was formed under Charles Bartel in which Pilsudski became Minister of War. Now began his long and powerful control of the Polish Government and the formation of the so-called constitutional dictatorship. Offered the presidency by Parliament on May 31, he refused, but in June became commander-in-chief of the army with powers independent of Parliament or the cabinet. Although admittedly dictator, he refrained from assuming absolute power, and opposition to him in

Parliament continued strongly in evidence. In October, the Opposition caused the resignation of the Bartel ministry and Pilsudski himself assumed the Premiership.

Until 1928 he retained the post of Premier, but illness in May of that year caused the break up of his forces in Parliament and on June 26 he forced the resignation of his cabinet, he himself resigning the following day. In the new ministry of Bartel he retained the post of Minister of War, and it was evident that the dictator was controlling from behind the scenes. On Aug. 25, 1930, he assumed full dictatorial powers and took the office of Premier. With a majority in Parliament, his adherents were for the first time squarely faced with the responsibility for a constructive political and economic programme. On December 4, in advance of the opening of the new Parliament, he resigned as Premier, but still kept the all-important post of War Minister in the cabinet of Walery Slawek. Again he was the power behind the throne. He now began to agitate for the revision of the Constitution, which he claimed was outmoded, and the balancing of the budget. The Slawek cabinet, weakened because of dissension with Pilsudski concerning the budget and increased military appropriations, resigned on May 26, 1931, and Col. Aleksander Prystor formed a new cabinet. In the years that followed, the steady undermining of parliamentary government continued. On May 16, 1934, a new cabinet was formed under Leon Kozłowski, Pilsudski still retaining control of the War Department.

Pilsudski's rule of Poland was often referred to as "a dictatorship by proxy," and for almost 10 years he was the unqualified ruler of Poland, even though he did not always hold the premiership or control Parliament. As Minister of War and head of the army he reserved to himself the formation of Poland's foreign policy and contended that without a strong military defense and a clearcut foreign policy, Poland would not exist. Recent constitutional reforms had given virtually limitless power to the president, and it was believed that had he lived he would have assumed that office. It was ever his dream that Poland should return to that "golden age" of the 14th to 16th centuries, and it was his qualities of leadership, determination, and skilled diplomacy that were instrumental in bringing about the existence of Poland as a political unity.

Besides frequent contributions to the Polish press, he wrote: *Illegal Prints* (1903); *Practical Problems of the Revolution in Russian Poland* (1910); *Military Geography of the Polish Kingdom* (1910); *History of the Fighting Organization* (1910); *Outline History of January Insurrection 1863* (1912); *January 22nd, 1863 (Polish Insurrection)* (1912); *On the Balkan War of 1912* (1914); *My First Fights (Polish Legion, 1914)* (1917); *Historical Corrections* (1931); *Memories of a Polish Revolutionist and Soldier* (1931).

PITTSBURGH, UNIVERSITY OF. A nonsectarian institution of higher education for men and women in Pittsburgh, Pa., founded in 1787. The total autumn enrollment for 1935 was 10,412, distributed as follows: The College, 2239; engineering, 464; mines, 122; business administration, 622; education, 941; off-campus centres, 871; graduate school, 1925; downtown division, 2344; medicine, 263; law, 233; pharmacy, 188; dentistry, 191; retail training, 9. The extension division enrollment was 1219. The 1935 summer session enrollment was

2407. There were 964 members of the faculty (including fellows of Mellon Institute of Industrial Research) during the year which closed June 30, 1935. The amount of endowment for the year ending June 30, 1935, was \$2,176,963, and the income was \$80,003. The library contained 188,879 volumes. Extensive departments of governmental service and social work were established. The Stephen Foster Memorial and the Heinz Memorial Chapel were being built. Chancellor, John G. Bowman, LL.D.

PIUS XI. See ROMAN CATHOLIC CHURCH.

PLATINUM AND ALLIED METALS.

According to an advance summary furnished by the U. S. Bureau of Mines, platinum refineries in the United States reported purchases of domestic crude platinum from the following sources in 1934: Alaska, 2190 oz.; California, 361 oz.; Oregon, 132 oz.; Washington, 1 oz.; and unspecified, 137 oz.—a total of 2821 oz. (508 oz. in 1933). Refiners in the United States also reported purchases of 51,810 oz. (58,897 oz. in 1933) of foreign crude platinum—12 oz. from Canada, 47,871 oz. from Colombia, 3595 oz. from South Africa, and 332 oz. unspecified. Reports from refiners of crude platinum, gold bullion, and copper indicate that 47,274 oz. of platinum metals were recovered in the United States from these sources in 1934, a decrease of 8.3 per cent compared with 1933.

Refiners reported the following average prices per oz. for refined platinum and allied metals in 1933 and 1934:

<i>Metal</i>	<i>1933</i>	<i>1934</i>
Platinum (ounce)	\$30 75	\$34 50
Palladium do	18.30	22 54
Iridium do	54 30	54.74
Osmium do	56 00	63 00
Rhodium do	43 50	44 10
Ruthenium do	41.75	37 40

The sales of platinum metals by refiners in the United States decreased from 107,821 oz. in 1933 to 95,904 oz. in 1934. A decrease from 11,149 oz. in 1933 to 6776 oz. in 1934 in the sales of platinum, and an increase from 15,946 oz. in 1933 to 19,555 oz. in 1934 in the sales of platinum to the dental industry are noteworthy. The sales of platinum to the jewelry industry decreased substantially—from 41,263 oz. in 1933 to 32,959 oz. in 1934.

POLAND. A central European republic, established Nov. 9, 1918. Capital, Warsaw (Warszawa).

Area and Population. With an area of 149,957 square miles, Poland had a population estimated at 33,024,000 on Jan. 1, 1934 (32,120,020 at the 1931 census). About 24.6 per cent of the people lived in urban communities. Living births in 1934 numbered 881,615; deaths, 479,684; marriages, 277,255; emigrations, 42,533. Estimated populations of the chief cities in 1934 were: Warsaw (Warszawa), 1,200,000; Łódź, 591,000; Lwów (Lemberg), 316,000; Poznań (Posen), 251,000; Kraków, 229,000; Wilno (Vilna), 207,000; Katowice, 129,000; Czeszochowa, 125,000; Bydgoszcz (Bromberg), 122,000; Gdynia (June 1, 1935), 53,192. In 1932 74.9 per cent of the population was Roman Catholic, 12.5 per cent Russian Orthodox, 9.6 per cent Jewish, and 2.7 per cent Protestant.

Education. Elementary education is free and compulsory, but about 32 per cent of the population remains illiterate. The school enrollment in 1934-35 was: Elementary, 4,654,796; secondary, 166,085; professional, 83,483; and university (1933-34), 49,727.

Production. The 1931 census showed 63.8 per cent of the working population engaged in agriculture, forestry, and fishing, and 15.4 per cent in

trade and transport. A total of 45,855,000 acres (48 per cent of the total area) was suitable for cultivation, 16,012,000 acres were meadow, and 20,565,000 acres were under forests. Production of the chief crops in 1934 was (in thousands of units): Wheat, 76,440 bu.; rye, 254,476 bu.; barley, 66,719 bu.; oats, 175,730 bu.; corn, 2976 bu.; potatoes, 1,229,807 bu.; sugar beets, 2572 metric tons; beet sugar (1934-35), 344 metric tons; clover, 1918 lb. Poland ranks second among flax-producing countries; the 1934 crop totaled 30,820 metric tons. Livestock on June 30, 1935, included 3,762,000 horses, 9,696,000 cattle, 6,703,000 swine, 2,783,000 sheep, and 354,000 goats. Thirty-eight per cent of the forest area is owned by the state. Exports of timber and wood products average about 20 per cent of the total Polish exports, the value in 1934 being 180,000,000 zlotys (155,000,000 in 1933). Deep-sea fisheries yielded 16,851,000 kilograms of fish in 1934 (14,629,000 in 1933).

Mineral and metallurgical production in 1934 was (in 1000 units—metric tons, except as indicated): Coal, 29,233; petroleum, 3910 bbl.; natural gas, 468,949 cu. meters; iron ore, 247.4; salt, 372.2; crude potash, 301.5; petroleum products, 484.8; pig iron, 382; steel, 856; rolled iron and steel, 619; lead, 10.3; zinc, 92.9. On Oct. 1, 1935, 440,722 persons were employed in manufacturing, 92,774 in mining, 38,681 in smelting, and 134,491 in public works. Textile factories employed 141,926 persons; metal foundries, 69,806; minerals, 53,641; food, 45,661; lumber, 37,936; chemicals, 34,316; paper, 12,749.

Foreign Trade. Imports for consumption in 1934 were valued at 798,760,000 zlotys (826,994,000 in 1933) and exports of Polish products at 975,342,000 zlotys (959,643,000 in 1933). The United States furnished 15.2 per cent of the value of Poland's 1934 imports (13.3 per cent in 1933); Germany, 13.6 (17.6); United Kingdom, 10.8 (10); France, 5.8 (6.8). Of the 1934 exports, the United Kingdom took 19.7 per cent (19.2 in 1933); Germany, 16.5 (17.5); Austria, 5.9 (5.8); and the United States, 2.3 (1.6).

Leading 1934 imports were (in 1000 U. S. gold dollars): Raw cotton, 12,462; metals and manufactures, 9402; machinery, 6474; greasy wool, 4590; hides and skins, 3672; fruits and nuts, 3121. The leading exports (in 1000 gold dollars) were: Wood and its manufactures, 19,911; coal, 17,724; metals and their manufactures, 12,991; bacon, 5243; rye, 4975; barley, 4027.

Imports in 1935 totaled 859,572,000 zlotys; exports, 925,943,000 zlotys. United States statistics for 1935 showed imports from Poland and Danzig of \$9,811,312 (\$5,648,362 in 1934) and exports to Poland and Danzig of \$24,485,703 (\$18,873,232 in 1934).

Finance. Budget estimates for the fiscal year ending Mar. 31, 1936, placed receipts at 2,016,000,000 zlotys and expenditures at 2,168,000,000 zlotys. Actual returns for 1934-35 were: Receipts, 2,115,000,000 zlotys; expenditures, 2,176,000,000 zlotys, for 1933-34, 1,869,000,000 and 2,206,000,000 zlotys, respectively. The public debt as of July 1, 1935, amounted to 4,641,847,000 zlotys (foreign, 3,160,725,000; domestic, 1,481,122,000 zlotys), compared with 4,303,672,000 on Jan. 1, 1934. The zloty (par, \$0.1899 in 1935) exchanged at an average of \$0.1118 in 1932, \$0.1441 in 1933, and \$0.1885 in 1934.

Communications. The state railways in 1933 had 12,680 miles of line and private and communal light railways had 909 miles. In 1933 the state lines

carried 138,171,000 passengers and 48,825,000 metric tons of freight, the gross receipts totaling 878,-624,000 zlotys. During 1934 the state railways averaged 11,716 15-ton carloads a day, compared with 10,620 in 1933. The highways in 1935 extended 208,819 miles, of which 36,205 miles were surfaced. The air lines during 1934 carried 18,198 passengers, 404,283 lb. of baggage, 393,910 lb of merchandise, and 63,888 lb. of mail. The Polish merchant marine in 1935 consisted of 37 steamers of 60,689 registered tons capacity and 20 motor ships of 3611 tons. During 1934 4592 vessels of 4,142,000 net register tons capacity entered the port of Gdynia, while 4880 vessels of 3,175,000 tons entered the rival port of Danzig (q.v.). Gdynia ranked fourth among the ports of continental Europe in the volume of traffic handled during 1934. Poland's new transatlantic liner, the *Pilsudski*, completed her maiden trip to New York on Sept. 24, 1935.

Government. The Constitution of Apr. 23, 1935, vested extensive powers in a President, chosen by popular vote from two nominees—one selected by the retiring President and the other by 75 electors (50 appointed by the Diet and 25 by the Senate and the highest state officials). In case the President refrains from nominating a candidate, the other nominee is automatically elected for the term of seven years. The President was empowered to appoint and dismiss the Prime Minister, to issue decrees with the force of law when the Diet (Sejm) was dissolved, and to dissolve the Diet and the Senate. The Diet consisted of 208 members, chosen by voters (male and female) over 24 years of age from lists of nominees selected by special bodies including representatives of various political, commercial, professional, educational, and other groups. The Senate was composed of 96 members, one-third chosen by the President and the remaining two-thirds elected by voters over 30 years of age who have been decorated for service to the state, have obtained an advanced education, or serve on certain public or semi-public agencies. Members of both the Diet and the Senate serve for five years. President in 1935, Ignace Moscicki (non-partisan), reelected May 8, 1933. Premier at the beginning of the year, Leon Kozłowski.

II. HISTORY

Domestic Affairs. The death of Marshal Josef Pilsudski (q.v.) in Warsaw on May 12, 1935, eliminated from the Polish scene the man who more than any other was responsible for the establishment of the Polish Republic. He shaped the course of the nation in domestic and foreign affairs throughout the postwar period, ruling as virtual dictator after crushing the opposition elements in his coup d'état of 1926. Amid impressive ceremonies and nation-wide homage, the body was buried with the Polish Kings of former centuries in the crypt of Wawel Cathedral at Cracow.

The passing of Pilsudski marked a turning point in Poland's constitutional and political history. It occurred within three weeks of the proclamation on April 23 of the new Polish Constitution, which after years of debate received final approval in the Sejm on March 20. Provisions of the new fundamental law are described under *Government*. The Constitution was drafted largely under Pilsudski's guidance and inspiration, and it embodied his conception of a government dominated by a strong executive with parliament relegated to a position of complete inferiority. In effect, it legalized the extra-constitutional position assumed by the Mar-

shal and his adherents after they seized power in 1926 and placed a definite check upon the activities of political parties.

On Mar. 28, 1935, the Kozłowski Ministry had been replaced by a cabinet under Col. Walery Slawek, formed for the express purpose of putting the new Constitution into effect. Five days before Pilsudski died, the Slawek Cabinet submitted to Parliament new electoral laws carrying into effect the anti-democratic principles of the new Constitution. Passed by the Sejm on June 28 and by the Senate six days later, the measures established an electoral system under which the principle of party representation in Parliament was abolished. The country was divided into 104 constituencies. In each constituency four candidates were nominated by municipal councils, chambers of commerce, labor federations, and professional groups. The voters were permitted to choose two out of each four candidates to represent them in the Sejm. The right to vote for candidates for the Sejm was granted to some 20,000,000 citizens, but the privilege of voting for members of the Senate was restricted to about 400,000. Of the latter, 70,000 represented persons decorated by the state, 200,000 had attained certain educational requirements, and 130,000 represented certain economic groups and autonomous government administrations. Following passage of these measures, Parliament was dissolved on July 10 and new elections were called.

The four candidates for the Sejm in each constituency were selected on August 14 by electoral committees composed of representatives of municipalities, and of commercial, labor, social, and professional groups. Local judges presided over the various committees and the committee proceedings were supervised by commissioners. With both judges and commissioners under the control of the government, it was not surprising to find that the great majority of candidates were members of the government bloc or sympathetic to it. The illiberal nature of the Constitution and the electoral laws led most of the Opposition groups to boycott the elections, held for the Sejm on September 8 and for the Senate on September 15. With only 46.5 per cent of the qualified electorate voting, as compared with 74.8 per cent at the 1930 election, the government bloc secured 190 seats out of the 208 seats in the Sejm. Only 60 per cent of the qualified voters participated in the Senate elections and 60 of the 64 Senators elected were affiliated with the government bloc. President Moscicki later appointed 32 additional Senators.

With his primary task accomplished, Premier Slawek handed in the resignation of his ministry on October 12. President Moscicki called upon Marjan Zyndram Koscialkowski to assume the Premiership and the latter succeeded in forming a cabinet the following day. The composition of the new ministry was significant as marking a break with Marshal Pilsudski's policy of entrusting most of the cabinet posts to military men who served under him in 1918-19 against the Germans and the Russians. In place of members of the so-called "Colonels" who had governed Poland for six years, Premier Koscialkowski named Eugen Kwiatkowski as Deputy Premier and Finance Minister and Gen. Roman Goerecki as Minister of Commerce and Industry. Otherwise the cabinet remained unchanged, with Col. Josef Beck as Foreign Minister and Marshal Pilsudski's selection, Gen. Theodore Addeus Kasprzycki, as Min-

ister of War. Just before his death Pilsudski had selected General Kasprzycki to succeed him as Minister of War and General Rydz-Smigly to follow him in the equally important post of Inspector General of the army.

In a speech outlining his programme delivered on October 24 Premier Kosciakowski made it plain that the major objective of his government was to rehabilitate the nation economically and financially. The world economic depression, and particularly the attendant low prices for farm products, had wrought havoc within the economic structure, depressing the standard of living of the peasantry and reducing purchasing power with consequent severe curtailment of the demand for industrial products. Budget deficits had mounted throughout the depression, despite repeated economies and new taxes. The Premier undertook to balance the budget and maintain the zloty at its existing level (about 19 cents) by further drastic economies, by an increase in the income tax, and by an extraordinary tax ranging from 7 to 20 per cent on all government salaries. He also pledged his government to hasten the reconstruction of the agrarian system, increase industrial production and eradicate unhealthy monopolies established by the industrial cartels, divide the national income on a more equitable basis, reorganize the administration and eliminate bureaucracy, and readjust the collection of tax arrears.

At the same time the Kosciakowski Government undertook to establish closer contact with the nation than had its predecessors. The Premier immediately after his appointment called the first official press conference in nearly a decade and invited the Opposition press to send its representatives. In line with this step was the announcement by former Premier Slawek on October 30 of the dissolution of the Pilsudski party as a formal political organization. In order to put his economic programme into effect, Premier Kosciakowski obtained from Parliament on November 8 authority to issue up to Jan. 15, 1936, decrees relating to economic and financial matters with the binding force of law. He used this power during the remainder of the year to put into effect his income tax and salary tax proposals and to inaugurate a large-scale offensive against the rigid and artificial industrial price structure. The dissolution of 30 cartels, comprising mostly iron, petroleum, and paper wholesale dealers, was decreed. Prices of sugar, coal, and other commodities were reduced and cuts in railway freight rates were announced for early in 1936. Other decrees modified interest rates and dates of payment of mortgage loans, lowered the interest rate on arrears in private legal proceedings, regulated the sugar market and the production of sugar beets, and raised the tax on capital and rents.

An important political achievement of Premier Kosciakowski during the year was the reconciliation of the Ukrainian minority with the government, after years of underground warfare between them. On the other hand his administration was marred during the autumn and winter months by repeated anti-Semitic outbreaks, particularly in Warsaw. Despite government efforts to check violence, it was estimated that the anti-Jewish riots cost more than a score of lives and resulted in injuries to between 300 and 400. Numerous Jewish shops were plundered. See *Jews*.

Foreign Relations. The death of Marshal Pilsudski, removing his dominating influence over Polish foreign policy, introduced a new element

of uncertainty into European diplomatic calculations at a time when the drift toward war appeared to be nearing its culmination. Pilsudski's diplomacy had been dominated by two primary motives—hatred of Russia and of communism and fear that France might seek to avert war with Germany by sacrificing the Franco-Polish alliance and permitting the Reich to seize the Polish Corridor and Polish Silesia. By the conclusion of the 10-year German-Polish non-aggression pact of Jan. 26, 1934, Pilsudski had won Hitler's pledge to respect the Polish boundary for a decade, while Hitler had driven a powerful wedge between Poland and France. The following year was marked by an increasingly pro-German orientation of Polish foreign policy, but apparently without a definite commitment by the Warsaw Government.

The conclusion of the Franco-Soviet alliance on May 2, 1935, greatly increased Poland's peril. She was almost certain to be the battleground of the threatened German-Soviet war. Poland could not aid the Reich to defeat the Soviet Union without exposing herself to the future appropriation of the Corridor by an all-powerful Germany. A Franco-Soviet victory over Germany, with Polish aid, would increase the danger of Communist penetration in Poland. Nor could Poland remain neutral in a Russo-German struggle without inviting almost certain invasion from one side or the other. Thus Warsaw in 1935 became the chief battleground of German and Franco-Soviet diplomacy, while within the country there was developing a struggle between the pro-Soviet, pro-French, and pro-German cliques, previously held under control by Marshal Pilsudski.

The continuance in office during 1935 of Col. Josef Beck, Pilsudski's choice for Foreign Minister, indicated that the Marshal's policy of keeping free of military combinations, while cultivating friendly relations with Germany, would be followed for the time being. Poland rejected the Franco-Soviet proposal for a multilateral treaty guaranteeing the territorial status quo in Eastern Europe when Capt. Anthony Eden, British Lord Privy Seal, visited Warsaw on April 1 in support of the proposal. The Poles feared the treaty would only increase the danger that Poland would be the cockpit of contending armies and that it would arouse German resentment. Nevertheless the Polish Foreign Office gave active support to the system of collective security in Europe established under the League of Nations Covenant, and joined in the application of economic and financial sanctions against Italy in November. At the same time Poland continued to treat as non-existent the obligations toward her national minorities which were formally repudiated at Geneva in 1934.

While Polish relations with Germany during the year were in general friendly, there was repeated friction over Nazi activities in Danzig (q.v.) and the treatment of Poles in Germany. Repeated moves toward the liquidation of the long-standing Polish-Lithuanian tension over Vilna were made on both sides during the year. However the revelation late in 1935 that high Lithuanian officials had supported the Ukrainian terrorist campaign in Poland which culminated in the assassination of Minister of Interior Pieracki in 1934 put a damper upon these negotiations. See *LITHUANIA* under *History*. The year also witnessed the continued development of serious friction with Czechoslovakia over the activities of the Polish minority in the Czechoslovak border district of Teschen. Poland took advantage of the disturbed

European situation to renew her claims to this district, in dispute since the establishment of the two republics. The acute state of Polish-Czechoslovak relations was particularly significant in view of the active efforts by influential groups in Poland, Germany, and Hungary to form an alliance designed to defeat the Soviet Union and destroy Czechoslovakia. The Czechoslovak territories would then be divided among the three powers.

See CZECHOSLOVAKIA, DANZIG, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, LITHUANIA, RUMANIA, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*; LEAGUE OF NATIONS.

POLAR RESEARCH. Antarctic. An exploit which made the year 1935 a notable one in the history of polar exploration was the 2100-mile aeroplane flight made by Lincoln Ellsworth and his pilot, Herbert Hollick-Kenyon, across a previously unexplored sector of the Antarctic Continent. Ellsworth had made two efforts to execute this plan in 1934 (see 1934 YEAR BOOK, p. 582), but was foiled by an accident to his plane and bad weather. Undaunted, he returned to the attack in November, 1935, and landed his aeroplane, the *Polar Star*, on Dundee Island in the Antarctic Archipelago on November 12. From there he prepared to span the Antarctic Continent to Admiral Byrd's former base at the Bay of Whales on the Ross Sea.

A start was made on November 20, but a leak in the plane's fuel line forced him to turn back after three hours of flying. A second start on the following day took Ellsworth and his pilot across the Weddell Sea to Hearst Land on the edge of Antarctica. At the border of Hearst Land and southward of Cape Eielson the explorers discovered a great mountain range rising to nearly 12,000 feet and extending in a northwest-southeast direction. Great cloud banks forced them to turn back after penetrating south of 71 degrees between 65 and 66 degrees west longitude. They returned to Dundee Island after 10½ hours' flying, having proved that the great mountain chain of which Graham Land is a part continued on the mainland.

The third flight began on November 23. The *Polar Star's* wireless communications to the base ship, *Wyatt Earp*, at Dundee Island ended mysteriously eight hours later, after Ellsworth had reported excellent progress across one-third of the distance to the Ross Sea. No further word was heard from the explorers until Jan. 16, 1936, when the British research ship *Discovery II* entered the Bay of Whales and found Ellsworth and Hollick-Kenyon safe at Admiral Byrd's base camp. The details of one of the most important and sensational polar explorations on record then became available.

On the first day of the flight the *Polar Star* crossed the mountain range in Hearst Land sighted on the previous flight and continued over a high plateau, broken at intervals by isolated mountains. At 5:45 p.m., with another mountain range in sight, Ellsworth dropped the American flag on hitherto unclaimed territory. From their aerial vantage point, the flyers saw that the new range extended some 75 miles, with peaks rising to about 13,000 feet. Bad visibility forced them to make their first landing after 9 p.m. on November 23, at Lat. 79 degrees 12 minutes S., and Long. 104 degrees 10 minutes W. On the following day at 5 p.m. the weather cleared temporarily and they took off again, only to be forced down in half an hour by bad visibility. After waiting three days in their tent for the weather to moderate, they took off

again on November 27. The fickle weather allowed them only 50 minutes of clear visibility and they landed just in time to escape a raging blizzard. It was December 4 before they were able to continue their flight. Again poor visibility led them to land within an hour to fix their position. They were then at Lat. 79 degrees 17 minutes S. and Long. 153 degrees 16 minutes W.

On December 5 they flew on toward Little America again. Almost within sight of the Bay of Whales their fuel gave out and they landed at Lat. 78 degrees 45 minutes S. and Long. 183 degrees 36 minutes W. After remaining four days with the plane in the hope of establishing wireless communication with their base ship, they packed their belongings on a handsled and walked the remaining 25 miles to Little America, where they arrived December 9. They had proved definitely that the Antarctic was a single great continent. They had also successfully inaugurated a new method of polar exploration—that of cutting loose from their base and landing to await clear weather whenever storms or clouds arose. It seemed likely that through the extension of this technique, the remaining mysteries of Antarctica would soon be solved.

Following its extensive explorations during the summer of 1934 in that section of Antarctic bordering the Ross Sea (see 1934 YEAR BOOK, p. 582), Adm. Richard E. Byrd's second Antarctic expedition left Little America safely on Feb. 6, 1935. The only other land expedition active in Antarctica during 1935 was the British Graham Land Expedition, headed by J. R. Rymill, which established a base hut on an island five miles off the coast of Graham Land early in 1935. The 14 members of the party planned to spend two years exploring the 1000-mile coastline between Charcot Land and Luitpold Land. Bad ice conditions prevented the expedition from carrying out its full plans during the summer season of 1935 but surveys and scientific work were carried on from Beascochea Bay to Cape Evensen and preparations were made for the main explorations in 1936.

Captain Michelsen of the Norwegian whaler-ship *Thorshavn* reported the discovery on Feb. 20, 1935, of new land in the Australian sector of the Antarctic at Lat. 67 degrees 50 minutes S. and Long. 80 degrees 45 minutes E. The ship followed the shore line as far as Lat. 68 degrees 29 minutes S. and Long. 78 degrees 36 minutes E. At this point a party went ashore, hoisted the Norwegian flag, and took photographs and specimens of soil. The new land was called Ingrid Christensen's Land after the wife of the owner of the ship.

Two British Royal research ships, the *Discovery II* and the *William Scoresby*, continued during 1935 their studies of the numbers, distribution, and life history of whales in the Antarctic seas. The *William Scoresby* returned to London from a seven-months' voyage to the Antarctic in May, 1935, and sailed for her fifth trip to the Antarctic again in October. The main objective of her voyages was to mark the whales in order to determine their movements. During the fourth trip between 700 and 800 whales were marked by long bullets from a gun in the bow of the ship. These marked bullets imbedded themselves in the flesh or muscle of the whale. When a marked whale is afterwards killed the bullet is found and returned to the ship's scientists, who offered a reward of £1 for each bullet recovered.

The *Discovery II* returned to London early in June after her third trip to the Antarctic, cover-

ing a period of 20 months. The crew and scientists on board carried out extensive studies of the great seasonal changes in the water movements in the Antarctic seas in order to trace the circulation of the marine animals and plants on which the whales live. The Pacific sector of the Antarctic waters were studied to determine the practicability of establishing a whale sanctuary there; the various dependencies of the Falkland Islands were mapped; and running surveys were made of the South Sandwich and South Orkneys island groups. Early in October the *Discovery II*, with her crew of 50 men, left London for a fourth voyage to the Antarctic.

Arctic. The Soviet Government, continuing during 1935 its large-scale explorations and scientific studies of the land and water areas between the White and Bering Seas north of the Arctic Circle, made important contributions to the existing knowledge of this vast region. The object of these scientific efforts was to compile information which would aid in the economic development of the Soviet Arctic and in the establishment of regular shipping services between Murmansk and Vladivostok to supplement the Transsiberian Railroad. As a result of Soviet polar research in previous years, ordinary freight vessels traversed the Northern Sea Route in both directions during the summer of 1935. Two freighters reached Kamchatka from Murmansk early in September and a week later two other vessels arrived at Murmansk from Vladivostok. All four vessels unloaded cargo and passengers at various new Soviet ports along the Siberian coast, the principal one being Igarka, a city of 30,000 inhabitants, at the mouth of the Yenisei River.

Of the Soviet explorations during 1935, the most important were those carried out by an expedition on the icebreaker *Sadko*, headed by Prof. George Ushakov. Going north into the Arctic ice pack to the west of Svalbard early in the summer, the *Sadko* slowly worked its way eastward in an effort to trace the warm waters of the Gulf Stream, which rise to the surface after passing Svalbard and markedly influence ice conditions. They found that the warm currents penetrated to Barents Sea between North Cape and Svalbard and also that after skirting Svalbard on the north, other warm currents flowed south into the Barents Sea between Svalbard and Franz Josef Land (Fridtjof Nansen Land) and then on into the Kara Sea between Franz Josef Land and North Land. Early in September the expedition discovered a previously unknown island east of Franz Josef Land at Lat. 80 degrees 51 minutes N. and Long. 75 degrees 25 minutes E. This oval-shaped island, about 11 miles wide and 28 miles long, was named Ushakov Island after the leader of the expedition. Five days later the *Sadko's* crew reported the discovery of three smaller islands near Komsomolets Island, the northernmost of the North Land group. Soundings taken from the ship indicated that all four islands were peaks of a submerged mountain chain to the northeast of Barents Sea and north of the Kara Sea, which formed a barrier preventing the southward movement into these waters of the heavier Arctic ice pack.

Returning to Archangel on September 29, Ushakov declared that the data obtained on the 85-day voyage of the *Sadko* permitted accurate prediction of ice formation in these regions for the first time. Supplementary data bearing out these conclusions were collected by another group of scientists aboard the icebreaker *Malygin* who conducted explora-

tions in this region and discovered six islands in the centre of the Kara Sea. An unsuccessful search for the mysterious Andreyev Land, supposed to exist somewhere northwest of Wrangel Island, was made by a party of Soviet airmen and scientists. The pilot V. S. Molokov reported that he had flown as far north as Lat. 73 degrees with several scientists without finding land. They found, however, a vast expanse of unbreakable and immovable ice, which strengthened the belief that the ice was held in position by islands situated north of the 73d parallel.

Three Soviet aviators surveying a proposed air route at the northeastern tip of Siberia disappeared after leaving Cape Wellen on Dec. 19, 1935. Another Soviet scientist was reported to have been lost in November while studying the migrations of seals and other sea animals on the ice floes at the entrance to the White Sea. See UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

In Greenland and the Svalbard Archipelago a number of British exploring parties were active during the summer of 1935. A party headed by L. R. Wager arrived on the east coast of Greenland early in July. On August 7 six members of the expedition left Irminger Fjord and nine days later reached the Watkins Mountains, 100 miles inland, which were first seen by H. G. Watkins of the British Arctic Air Route Expedition during an aeroplane survey flight in 1930. On August 17 the party reached the summit of the highest mountain in the range, which rose to 12,250 feet. After making surveys, photographs, and observations, and climbing a number of other mountains, the party returned to the ship on August 22. Five men and two women under Mr. Wager were then landed at Kangerdluak, where they spent the winter, while the remainder of the expedition under Augustine Courtauld returned to England.

After spending the winter of 1934-35 at Etah, West Greenland, the British Ellesmere Land Expedition under Dr. Noel Humphreys divided into three parties for the summer's work in 1935. A. W. Moore and H. W. Stallworthy sledged from Fort Conger across the United States Range into Grant Land to Lat. 82 degrees 25 minutes N. Still further north they saw a great range of mountains, rising to an altitude of about 10,000 feet, which they named provisionally the British Empire Range. The second party consisted of Edward Shackleton and Robert Bentham, who did geological and survey work in the vicinity of Scoresby Bay. Meanwhile Dr. Humphreys and Mr. Haig-Thomas explored another section of the interior of Ellesmere Island but were unable to cross Grinnell Land due to the refusal of their Eskimos to accompany them. Leaving Greenland on board the Danish ship *Dannebrog* in August, the expedition reached home in October. It also had to its credit a crossing of the Greenland ice cap from Etah to Thule.

The Oxford University Arctic Expedition under A. R. Glen early in August established a winter base at Brandy Bay, on the north shore of North-East Land, the northernmost island of the Svalbard (Spitsbergen) Archipelago. Members of the party explored parts of the interior, surveyed the north coast of North-East Land, and established stations for meteorological and other scientific studies during the winter. They planned to visit Giles White Island, where the Andrée remains were discovered, and sought also to discover the fate of the Schroeder-Stranz expedition, which disappeared in 1912. Capt. Robert Bartlett made his ninth voyage to Greenland with a party of Ameri-

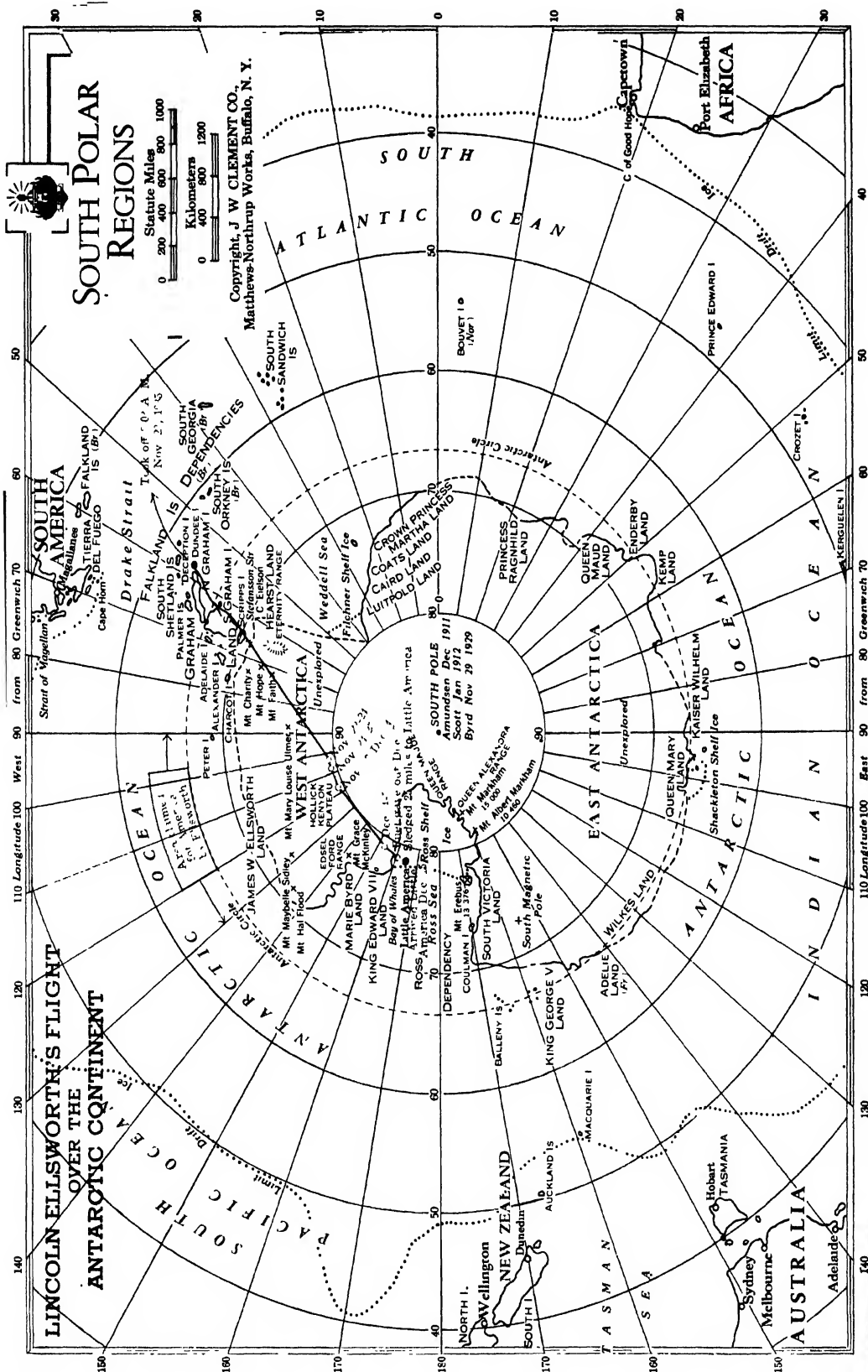
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I

**LINCOLN ELLSWORTH'S FLIGHT
OVER THE
ANTARCTIC CONTINENT**



cans, who collected specimens for the American Museum of Natural History, the Field Museum of Chicago, the Smithsonian Institution, and the New York Zoological Park.

POLIOMYELITIS. See **MEDICINE AND SURGERY.**

POLISH CORRIDOR. See **DANZIG, GERMANY, and POLAND** under *History*.

POLITICAL AND SOCIAL SCIENCE. THE AMERICAN ACADEMY OF. A national forum for the discussion of political and social questions, founded in Philadelphia in 1889, and incorporated in 1891. The organization takes no sides upon controversial questions. Its aim is to secure and present reliable information to assist the public in forming an intelligent public opinion. A meeting held on February second discussed "The Federal Program for Economic Security." On February 13, the members and guests of the Academy were addressed by His Excellency, The Ambassador of the Union of Soviet Socialist Republics, Honorable Alexander Antonovich Troyanovsky on "The Foreign Policy of the Soviet Union." The 39th Annual Meeting held April 5 and 6, considered the general subject, "Socialism, Fascism and Democracy." A conference held April 13 was devoted to the topic, "The United States and Latin America." On May 3, Sir Josiah Stamp addressed the Academy on "International Cooperation in Economics and Finance." A meeting held May 23 and 24 dealt with the general topic, "The State Constitution of the Future." On November 29, the Academy was addressed on the subject of "Rising Prices and the Consumer" by Gilbert H. Montague, Esq., Dr. Edwin W. Kemmerer and Mr. Leon Henderson. On December 13, Dr. André Siegfried discussed "The World Challenge to Europe."

The *Annals*, issued bimonthly, is the official organ of the Academy. Each issue is devoted to a particular topic of economic, political, or social importance. Topics considered in 1935 were "Radio: The Fifth Estate"; "Increasing Government Control in Economic Life"; "Pressure Groups and Propaganda"; "Socialism, Fascism and Democracy"; "The State Constitution of the Future"; and "Education for Social Control."

The Academy has established a monograph series, the first of which was a study on *Private Police* with special reference to Pennsylvania, prepared by Dr. J. P. Shalloo.

The Academy has inaugurated also a pamphlet series, the first of which is entitled *Economics of Planning* and is an authorized reprint of a series of articles appearing under the title indicated, in the Manchester (England) Commercial Guardian. The second in the series is entitled *Financing New York City*, by William Whyte.

The officers in 1935 were: President, Ernest Minor Patterson; Secretary, J. P. Lichtenberger; Treasurer, Charles J. Rhoads; Vice Presidents, Herbert Hoover, Carl Kelsey, and Charles G. Haines. Headquarters are at 3457 Walnut Street, Philadelphia, Pennsylvania.

POLITICAL ECONOMY. Subjects in the field of applied economics are treated in this volume under the following heads: **BANKS AND BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; CHILD LABOR; COOPERATION; LABOR ARBITRATION AND CONCILIATION; LABOR LEGISLATION; MINIMUM WAGE; OLD AGE PENSIONS; STRIKES AND LOCKOUTS; UNEMPLOYMENT; WOMEN IN INDUSTRY; WORKMEN'S COMPENSATION.** See also such articles as: **CHILD WELFARE; LABOR, AMERICAN FEDERATION OF; STATISTICS; SO-**

CIALISM; TRADE UNIONS; WELFARE WORK. See also the article on **AGRICULTURE** and the various crops. Further discussions are to be found in articles on the several industries, minerals, public utilities, etc. Books on political science and economics for the general reader are to be found listed in the article **LITERATURE, ENGLISH AND AMERICAN, under Economics and Politics.**

POLITICAL SCIENCE, ACADEMY OF. An international learned society for advancing the political sciences and their application to political, economic, and social problems, founded in 1880 in New York City and incorporated in 1910. Its membership on Dec. 31, 1935, numbered 6692, of whom 7 were honorary members, 220 life members, 5218 individual members, and 1247 subscribing members, chiefly libraries and organizations. At the semi-annual meeting on Apr. 16, 1935, in New York City "Problems of Social Security Legislation in the United States" was discussed.

At the fifty-fifth annual meeting on November 14 the topic under discussion was "The Constitution and Social Progress." The officers for 1935 were: Wesley C. Mitchell, president; Albert Shaw and R. C. McCrea, vice presidents; Parker T. Moon, secretary and editor of publications; George A. Plimpton, treasurer, and Miss Ethel Warner, director and assistant treasurer. Headquarters were in Fayerweather Hall, Columbia University, New York City.

POLO. The thrilling triumph of Greentree, a new team in the national open championship and in the Monty Waterbury Memorial Cup tournament, made the 1935 polo campaign one of the best in years. Greentree's triumph served to bring Thomas Hitchcock, Jr., back to the game and at the close of the season he was playing with all the consummate skill and zest he possessed prior to his fall in 1933. For several years John Hay Whitney's Greentree team had attempted to annex the open title but had never been able to attain this goal until Hitchcock's generalship and aggressiveness gave the team the competitive spirit lacking in other years. With Hitchcock on the team that rode so sensationally through the major tournaments were George H. (Pete) Bostwick, Gerald Balding, and Whitney. As a result of the stylish play, Hitchcock was raised to 10 goals, the lone top man in the game, Balding to 9, and Whitney to five in the handicap ratings of the United States Polo Association in December.

Polo reached a new high in matters of spectator interest as well as player interest. And added attention was focused on the game when the team of the Hurlingham Club of London played on Long Island in the open championship. The team, made up of Capt. M. P. Ansell, Capt. H. C. Walford, Capt. P. B. Sanger, Capt. Humphrey Guinness, and Eric H. Tyrell-Martin, was eliminated early in the tournament, but gained invaluable experience for the Westchester Trophy matches to be played in London in 1936.

The junior championship tournament was staged at Bedminster, N. J., and a new champion was crowned. The Aiken Knights with Bostwick, James Curtis, Winston Guest, and Dunbar Bostwick won the title. The intercollegiate championship was played at Governors Island and Yale's four of Jay Secor, R. E. L. Wilson, Peter Dominick, and Peter Grace won the championship.

The indoor game progressed with the same speed of the outdoor sport and once again the New York Athletic Club four won the senior honors in the East-West series, the team of Billy

Reynolds, Clarence Combs, and Arthur Borden conquering 124th Field Artillery of Chicago, the trio which took the honors in the Sherman Memorial play. Governors Island won the national junior title and Army took the intercollegiate championship. A superb Lawrenceville School three won interscholastic honors.

PONAPE. See JAPANESE PACIFIC ISLANDS.

PONDICHERY. See FRENCH INDIA.

POPULATION. See each country under *Area and Population*.

PORGY AND BESS. See MUSIC.

PORTS AND HARBORS. Port and harbor work is a more or less continual activity throughout the world, and, unless a construction is of a spectacular nature or is technically outstanding, the details of such work are seldom recorded in the engineering journals. One of the most interesting constructions of this kind noted during the year was the new 15,000 ton floating dry dock which is nearing completion. Compared with the huge floating dock at Southampton, England (made floating to avoid costly gravity works but moored in a special basin), this Seattle dock is of relatively unimportant size. In fact, the Southampton Dock is 1200 ft. long and is capable of handling the great 73,000 ton *Queen Mary*. The Seattle construction, however, is notable for the unusual curved-bottom pontoons used in its design. These chambers, which supply the necessary buoyancy to lift a ship in the dock, are usually made flat-bottomed. The Seattle innovation, it is expected, will not only give increased stability but will permit more complete draining of the interior of the pontoons.

PORTUGAL. A republic of southwestern Europe. Capital, Lisbon.

Area and Population. Portugal has an area of 35,582 square miles, including the Azores and Madeira (1196 sq. miles). The estimated population in 1934 was 7,177,000 (6,825,883 at the 1930 census). Living births in 1934 numbered 203,058, deaths, 118,539; marriages, 47,542. The chief cities, with their 1930 populations, are: Lisbon (Lisboa), 594,390; Oporto (Pôrto), 232,280; Coimbra, 27,313; Braga, 26,962. Roman Catholicism is the dominant religion.

Education. Illiteracy increased from 54.7 per cent of the adult population in 1920 to about 60 per cent in 1930. The school attendance in 1932-33 was: Primary, 420,499; secondary, 19,457; university, 6753. There are three universities at Lisbon, Coimbra, and Oporto and a technical university at Lisbon.

Production. Agriculture, the main occupation, is supplemented by fishing, mining, and manufacturing. In 1934 about 2,187,000 acres, or 61 per cent of the total area, was under cultivation and 20 per cent was devoted to meadows. Yields of the chief crops in 1934 were (in thousands of units): Wheat, 20,486 bu.; rye, 4802 bu.; barley, 2346 bu.; oats, 5340 bu.; olive oil (1934-35 season), 7040 gal. In 1933 production of corn was 11,791,000 bu.; potatoes, 22,787,000 bu.; wine, 243,046,000 gal. Mineral production in 1934 was (in 1000 metric tons): Coal, 206,898; iron pyrites, 205,670; wolframite (tungsten ore), 540; cement, 184,146. Output of paper in 1934 was 13,827 metric tons; shoes, 149,891 pairs. Net imports of raw cotton were 47,724,000 lb. The textile industry, the chief manufacturing line, employed about 48,000 operatives in 1934. The sea fisheries in 1934 yielded 216,500 metric tons of fish, valued at 195,900,000 escudos.

Foreign Trade. Imports for consumption in 1934 were valued at 1,960,146,000 escudos (1,905,-

348,000 in 1933) and exports of Portuguese products at 852,705,000 escudos (802,453,000 in 1933). Leading 1934 imports were (in 1000 gold dollars): Gold bullion, 4056; raw and carded cotton, 3974; heavy iron and steel, 3730; coal, coke, and briquets, 3616. Leading exports were (in 1000 gold dollars): Port wine, 4167; canned sardines, 3629; cork and cork products, 3970; woven cotton fabrics, 1096. Imports come mainly from the United Kingdom (22.9 per cent of the total in 1934), Germany, Portuguese colonies, United States, and France. Exports go chiefly to the United Kingdom (26.3 per cent), Germany, Portuguese colonies, France, and the United States.

Including bullion and specie, the 1935 imports totaled 2,218,800,000 escudos; exports, 892,320,000 escudos. Exports to the United States were \$3,644,337 (\$4,137,484 in 1934); imports from the United States, \$10,836,713 (\$7,908,731 in 1934).

Finance. Budget estimates for the fiscal year ended June 30, 1935, were: Receipts, 2,178,000,000 escudos; expenditures, 2,176,000,000 escudos. Closed accounts for 1933-34 showed receipts of 2,015,000,000 escudos (1,953,200,000 in 1932-33) and expenditures of 2,086,900,000 escudos (1,957,200,000 in 1932-33). The funded debt on Apr. 30, 1935, was 6,506,905,000 escudos (external, 3,508,145,000) and the floating debt was 52,522,000 escudos; offsetting credits totaled 678,616,000 escudos. The escudo (par, \$0.0748 in 1935) exchanged at an average of \$0.0320 in 1932, \$0.0392 in 1933, and \$0.0461 in 1934.

Communications. Portugal in 1933 had 2155 miles of railway line (824 miles state-owned), which carried 23,000,000 passengers and 4,372,000 tons of freight. Highways extended about 8900 miles. The opening of an air line between Lisbon and Tangiers in October, 1934, linked the Portuguese capital with Brazil and South America by the Air France Transatlantic line. The merchant fleet on June 30, 1935, consisted of 183 steamers and motor ships of 237,840 gross tons.

Government. The dictatorship established by a military-civilian directorate in 1926 was placed on a corporative basis by the Constitution promulgated Feb. 22, 1933. This provided for a President, elected for seven years by direct suffrage by the "educated heads of families"; a National Assembly of 90 Deputies, elected for four years (45 by direct suffrage and 45 by economic corporations). A Corporative Chamber, attached to the National Assembly, was to report and advise on all bills introduced in the National Assembly before the latter body could act upon them. President in 1935, Gen. Antonio Oscar de Fragoso Carmona, reelected Feb. 17, 1935. Prime Minister, Minister of Finance, and dominant spirit in the dictatorship, Dr. Antonio de Oliveira Salazar.

History. The establishment in Portugal of a corporative state on the Italian model, as provided for in the Constitution adopted Mar. 19, 1933 (see above under *Government*), was carried to virtual completion in 1935. The new National Assembly and the appointive Corporative Chamber had been selected in December, 1934, entirely from the government-controlled National Union, as all the opposition political groups and labor unions had refused to participate (see 1934 YEAR BOOK, p. 585-586). The National Assembly and the Corporative Chamber assembled on Jan. 11, 1935, for a three-months' session. It was the first Parliament to meet since 1926, when General Carmona established his dictatorship. On the same day a Presidential election was called for February 17.

The voting for President was a foregone conclusion. No other candidate ventured to oppose President Carmona, and he was reelected for another seven-year term expiring Apr. 15, 1942.

The Ministry under Dr. Antonio de Oliveira Salazar, the real dictator of Portugal, continued in office, with a minor reorganization on May 11 which elevated Dr. A. R. Monteiro, former Colonial Minister, to the Foreign Office. During an illness of President Carmona in April, Premier Salazar took over all formal Presidential duties in addition to his own. There was no relaxation of the curb placed upon opposition political groups, the press, labor organizations, and other elements antagonistic to the dictatorship. The censorship of local news was extended in September to include all dispatches sent out of the country and all foreign newspaper correspondents were placed under the supervision of a government bureau.

The new Parliament approved the government's plans for a more systematic development and utilization of the economic resources of Portugal and of its extensive colonies. A 15-year programme was adopted providing for the improvement of national defense and the economic reorganization of Portugal at a total cost of 6,500,000,000 escudos. Included in the programme were the extension of railway, highway, and aviation facilities; the improvement of commercial and fishing ports; development of a national electric power system and of telegraph and telephone systems; the irrigation, improvement, and resettlement of agricultural lands; the building of new schools and of other state services; etc. A Council of the Colonial Empire was created to reorganize the colonial governments, speed up the rate of the colonies' economic development, and strengthen their defenses.

Rumors were again current in European capitals during 1935 that negotiations were under way among the great powers to satisfy the land hunger of Germany, Italy, and possibly Japan at the expense of Portugal's rich but practically defenseless colonial empire. On May 16 the government considered it necessary to announce that none of its colonial territory was for sale. On November 16 the Governor of Macao declared that Portugal would not sell Macao (q.v.) or any of its colonies to Japan, that he had taken precautions against Japanese espionage, and that Portugal relied upon Great Britain for aid in the event of aggression upon its colonies. The growing danger from the great militarist powers increased the importance to Portugal of its century-old alliance with Britain. Portugal accordingly supported the British in their dispute with Italy over Ethiopia (q.v.). On October 18 the *Diario de Noticias* of Lisbon announced that the Anglo-Portuguese entente had been extended to include Spain as a result of the visit to Madrid of Foreign Minister Monteiro. See SPAIN under *History*.

PORTUGUESE EAST AFRICA. See MOZAMBIQUE.

PORTUGUESE GUINEA. A Portuguese colony in West Africa. Area, 13,944 sq. miles; population (1930), 364,929. Capital, Bolama; chief port, Bissau. Rice, wax, oil, seeds, ivory, and hides were the chief commercial products. In 1932, imports were valued at 26,246,609 escudos; exports, 36,023,892 escudos (escudo averaged \$0.0320 for 1932). A decree of May 9, 1935, provided that future fiscal years should coincide with the calendar year and approved the budget expenditure of 20,783,803 paper escudos for the 18 months ending

Dec. 31, 1936 (escudo equaled \$0.0449 on June 13, 1935).

PORTUGUESE INDIA. See INDIA, PORTUGUESE.

PORTUGUESE WEST AFRICA. See ANGOLA.

POST, WILEY. An American aviator, died in an aeroplane accident at Walkpi, near Point Barrow, Alaska, Aug. 15, 1935. He was born in Grand Saline, Tex., November, 1899, and educated in the local schools. His early interest in mechanics led him to seek further knowledge and he attended an automobile school in Kansas City, Mo. In 1916 he obtained work as a mechanic and chauffeur in the Chickasha and Lawton Construction Company, but in the summer of 1917 joined the Students' Army Training Corps at the University of Oklahoma, and there learned the intricacies of radio. At the close of the World War, he obtained work in the oil fields, and eventually became a driller. Always anxious to get into the aeronautical field, he persuaded friends to let him act as a parachute jumper on their air tour of the Southwest. They agreed and for almost two years he went about the country making parachute jumps. Making a successful flight in the plane of a friend, he was determined to buy his own plane and to obtain the money went back to oil drilling in 1924. On his first day at work he suffered an injury to his left eye which necessitated its loss. He was awarded about \$2000 compensation, and out of this money purchased his first aeroplane.

For a few years he toured the Southwest giving exhibitions, until in 1928 he became a pilot for F. C. Hall, an Oklahoma oil man. Hall purchased a Wasp-motored Vega monoplane, which he christened the *Winnie Mae*, in honor of his daughter. In order to qualify as a licensed pilot, Post had to furnish the Government with 700 logged flying hours, which was more than usually required, because of his defective vision. This he did in about eight months. Shortly after, Mr. Hall turned the *Winnie Mae* back to the factory and Post flew it to California, where the Lockheed Aircraft Co., offered him a job as a test pilot. He accepted and served as a flying escort for the Women's Air Derby of the 1929 National Air Races, and also demonstrated the Lockheed plane on the Ford Air Tour.

In 1930, Mr. Hall rehired Post and ordered a new ship, also named the *Winnie Mae*. Post persuaded him to let him use it in the Bendix Trophy Race from Los Angeles to Chicago, and he won first prize of \$7500, flying the Lockheed-cabin plane with a Pratt & Whitney Wasp engine, his time being 9 hours, 9 minutes, and 4 seconds. He now made plans for a round-the-world flight, and financed by Mr. Hall, he engaged Harold S. Gatty to act as a navigator. The pair flew 15,474 miles in 8 days, 15 hours, and 51 minutes. The flight was begun at Roosevelt Field, N. Y., on June 24, and was completed on July 10, 1931. See YEAR BOOK 1931.

Post then purchased the *Winnie Mae* from Mr. Hall and in 1933 made plans for a solo flight-around-the-world, which he started from Floyd Bennett Field, New York on July 15. The length of the flight was 15,596 miles and the elapsed time was 7 days, 18 hours, and 49½ minutes, beating the record he and Gatty made two years previously by 21 hours and 1½ minutes. His record of 25 hours and 45 minutes from New York to Berlin, made during this flight, was considered one of the greatest and most accurate flights ever made. The

flyer utilized to great advantage the automatic pilot, a gyroscopic stabilizer connected to ailerons and rudder, for holding the plane on a true course while he rested. See YEAR BOOK 1933. For this globe-circling flight he was awarded the gold medal of the Fédération Aéronautique Internationale in the following year. In 1934 he flew the *Winnie Mae* to an unofficial altitude of 48,000 feet, but a defective barograph prevented the record from being accepted.

During the latter part of 1934 and the first half of 1935, Post devoted considerable time to showing the feasibility of increasing aeroplane speed by flying in the rarefied air of the sub-stratosphere. He built a flying suit in which he could maintain normal atmospheric pressure and oxygen content about his body regardless of altitude, and had his ship's motor equipped with a supercharger to maintain its power in the thin upper air. He made four attempts to cross the North American continent by stratosphere flying but failed. His first attempt was made Feb. 22, 1935, and ended, due to mechanical trouble, in the Mohave desert; the second, begun March 15, ended at Cleveland, his plane running short of oil; the third ended at Lafayette, Ind., on April 14, and the fourth, at Wichita on June 15, the last two being due to mechanical defects.

After his unsuccessful stratosphere flights, he decided that the *Winnie Mae* had outgrown its usefulness, and so purchased a new plane, supervising the building of it himself. It was a red Lockheed monoplane of low wing type, with an Orion fuselage mounted on a Sirius wing, and equipped with pontoons for sea landings instead of wheels. Deciding to take a vacation and revisit Siberia, he, accompanied by Will Rogers (q.v.), left San Francisco on Aug. 1, 1935, on the way north. They made several short jumps, and on August 15 left Fairbanks for Point Barrow. They were forced down at Walkpi because of motor trouble but continued on their way after Post made a few repairs. Rising about 50 feet, the motor began to miss and Post, in an endeavor to glide back to the river, banked the plane, which dove earthward with terrific force, and its two occupants were killed.

One of the most capable of American flyers, whose achievements helped to place American aviation in the position it enjoys to-day, Post was awarded, besides the gold medal of the F.A.I., the Distinguished Flying Cross by Act of Congress in 1932, the Collier Trophy for the outstanding aeronautical feat of the year, and, in 1934, the gold medal and \$700 prize founded by the late King Albert of Belgium, and the Harmon Trophy of the F.A.I.

POTATOES. The 1935 potato production of 21 countries reporting to the International Institute of Agriculture, all countries of the northern hemisphere and not including the Soviet Republics, was reported as 3,710,265,000 bu. which was 12.9 per cent below their production in 1934 and 6.5 per cent below their average yield for the five years 1929-33. The 1935 acreage of 21,648,000 acres was 1.2 per cent below the acreage of 1934 and 1.3 per cent above the average area for the five-year period. The leading European potato-growing countries not including Czechoslovakia, France, Spain, Italy, and Rumania, reported the following yields in 1935: Germany 1,510,151,000 bu., Poland 1,079,762,000 bu., England and Wales 103,749,000 bu., Bulgaria 101,411,000 bu., and the Netherlands 91,670,000 bu. In 1934 France produced 611,887,000 bu., Czechoslovakia 340,580,000 bu., and Spain 177,152,000 bu. For the five years 1928-32 the

Soviet Republics recorded an average production of 1,602,822,000 bu. and an average acreage of 13,496,000 acres. In the crop-year 1933-34 Argentina produced 33,778,000 bu. The Canadian crop of 1935 was estimated at 64,643,000 bu. produced on 507,000 acres, the crop being 19.4 per cent and the acreage 10.9 per cent below the yield and area of 1934.

The 1935 production of potatoes in the United States as estimated by the Department of Agriculture was placed at 356,406,000 bu., approximately 29,000,000 bu. less than the large crop of 1934. In the northern States freezing weather in the fall of 1935 reduced the yield and impaired quality. The 1935 potato production of the 18 surplus States was estimated at 243,602,000 bu., and compared with 272,274,000 bu. in 1934 and 251,873,000 bu., the average production for the five years 1928-32. The production in the 12 other late potato States, estimated at 39,535,000 bu., was about 360,000 bu. below the 1934 crop. The yield per acre for the entire country was 109 bu. compared with 116.4 bu. in 1934 and an average of 112.8 bu. for the 10 years 1923-32. The average farm price during the earlier part of 1935 marketing season was 58.6 cents per bu. or 11.7 cents above the average farm price of the 1934 marketing season. On the basis of these prices the 1935 crop was valued at \$208,713,000 and the 1934 crop at \$180,761,000.

The yields of the leading producing States in different groups was reported as follows: late surplus States, Maine 38,640,000 bu., Minnesota 28,390,000 bu., Michigan 24,985,000 bu., and Pennsylvania 22,572,000 bu.; late non-surplus States, Ohio 12,826,666 bu., Iowa 6,300,000 bu., Indiana 5,280,000 bu., and Illinois 4,050,000 bu.; intermediate crop States, Virginia 11,352,000 bu., New Jersey 9,750,000 bu., Kentucky 5,763,000 bu., and Missouri 4,212,000 bu.; and early crop States, North Carolina 9,130,000 bu., Tennessee 4,446,000 bu., Arkansas 3,476,000 bu., and Texas 3,240,000 bu.

The 1935 certified seed potato production was estimated at 12,093,000 bu. Maine, the leading State, reported a yield of 5,872,000 bu., and North Dakota, ranking next, a yield of 1,430,000 bu. During the fiscal year ended June 30, 1935, the United States exported 73,067,000 lb. and imported 18,581,000 lb. of potatoes.

POUND, CUTHBERT WINFRED An American jurist, died in Ithaca, N. Y., Feb. 3, 1935. Born in Lockport, N. Y., June 20, 1864, he graduated from Cornell University and studied law with John E. Pound of Lockport, being admitted to the bar in 1886 and entering into partnership with his brother in Lockport until 1895. His first political office was that of city attorney, which he held from 1889 to 1891. Three years later he was elected a member of the New York State Senate and served until 1895 when he was defeated for the renomination. During his term of office he served on many important committees, including those of privileges and elections; state prisons, of which he was chairman, and the judiciary, internal affairs, and general laws. He was a member of the Lexow Committee to investigate the police department of New York City and was on the special committee which examined charges of bribery made by the *New York Press* against certain senators. Also, he served on the committee that investigated the Onondaga Salt Springs Reservation and was the author of the minority report adopted by the Senate. He introduced several bills which became laws, among which may be mentioned, the compulsory education act; amendment to the corrupt practices act

prohibiting bribery at caucuses and conventions; and the act creating a commission of prisons pursuant to the new constitution. He had charge of the woman suffrage constitutional amendment in the Senate, which for the first time passed both houses.

In 1895 he was appointed professor of law at Cornell University, teaching constitutional, corporation, and criminal law, and in 1900 was appointed to the New York Civil Service Commission, two years later being elected its president. In 1904 he resigned from the Cornell faculty and, in the following year, from the Commission to return to private practice. In that year he became counsel to Gov. Frank W. Higgins, and served until 1906, when he was appointed a justice of the Supreme Court for the 8th Judicial District of New York to succeed the Hon. Henry A. Childs. In 1907 he was elected for the full term of 14 years, but in 1915 was appointed associate justice of the New York Court of Appeals, being elected in 1916 for the term ending 1930. He was reelected in November of that year for the term 1931-34, and in 1932, Gov. Franklin D. Roosevelt appointed him chief justice. He retired at the expiration of his term in 1934, having reached the retirement age.

During the period he served on the bench, he was the author of many decisions, of which some of the more important ones were. *Quinby v. Public Service*, which limited the power of the Public Service Commission to raise trolley fares fixed by local franchise; *New York v. Brooklyn City R.R. Co.*, upholding the power of the city to operate street railroads; *P. ex rel Chadbourne v. Voorhis* on the constitutionality of literacy tests for new voters.

In 1921, Judge Pound was the chairman of the convention to revise the judiciary article of the New York State Constitution, and in 1934 was a member of the State Judicial Council formed to regulate and speed up court procedure. He contributed many articles to legal reviews, particularly "Defective Law. Its Cause and Remedy," to the New York State Bar Association *Bulletin*.

POWER PLANTS. An index of returning industrial activity during 1935 was provided by the notable increase in power output of the electric utilities as well as by the considerable new construction among industrial power plants. Not only was the central station output consistently greater throughout the year than that of 1934 by more than 9 per cent, but it also exceeded that of 1929 by over three billion kilowatt-hours. During the fall months the increase was especially marked and an all-time peak was reached in December. The total production of electricity by central stations in 1935 was approximately 93,500,000,000 kw-hr compared with 85,564,000,000 kw-hr in 1934 and 90,277,000,000 kw-hr in 1929. If the output of electric railways, public works, and other plants generating power for public use be added to that of the central stations, the total energy generated during 1935 would be 98,670,000,000 kw-hr. Of this approximately 60 per cent was generated by fuel and 40 per cent by water power. The foregoing figures are, of course, exclusive of electricity generated by private industrial power plants of which there is no combined record.

The growth of central station output (including electric railways and other plants supplying power for public use), the capacity and the improved efficiency of generation, as indicated by the consistent decrease in pounds of coal per kw-hr, are shown in the accompanying tabulation of figures compiled by the U.S. Geological Survey.

Year	Electricity generated (kilowatt-hours)	Capacity (kilowatts)	Coal per kilowatt-hour (pounds)
1919	38,921,000,000	13,093,972	3.2
1921	40,975,000,000	15,448,126	2.7
1923	55,655,000,000	17,458,367	2.4
1925	65,870,000,000	23,648,500	2.1
1927	80,205,000,000	27,052,197	1.84
1929	97,352,000,000	31,952,396	1.69
1931	91,729,000,000	35,590,072	1.55
1933	85,402,000,000	36,038,465	1.47
1934	91,150,000,000	35,873,825	1.47
1935	98,670,000,000	35,803,628	1.47

In April, 1935, the first Interim Report of the National Power Survey was released by the Federal Power Commission. This covered a study of 215 electric utility systems comprising 91 per cent of the installed generating capacity in central stations. The Report contended that a resumption of normal industrial activity, plus the greatly increased domestic use of electricity, would find the utilities short of capacity inasmuch as very little new generating capacity had been installed since 1931 and much of the older equipment was rapidly becoming obsolete. This contention was vigorously disputed by utility executives at the annual meeting of the Edison Electric Institute in June. Adequate capacity was claimed and those responsible for the Power Survey Report (see section on Water Power) were accused of attempting to justify the vast hydro-electric developments undertaken with government funds. The fact that the holding company legislation was then pending and was being vigorously opposed by the utilities was a factor in their deferring new construction.

However, toward the end of the year a number of the utilities were forced to heed the steadily increasing load by planning and initiating proposals for additional capacity and a number of contracts were let. The number of proposals pending at the end of 1935 were indicative of considerable construction activity in the utility field during 1936. In most cases these do not involve new power stations but rather the installation of large high-pressure boilers and turbines, exhausting to low-pressure equipment in existing stations. This arrangement, known as "Super-position," makes it possible to add capacity at minimum unit cost, since it involves no expenditure for site, building, condensers, circulating-water tunnels, etc., and at the same time increases the overall station efficiency.

In such additions boilers ranging from 300,000 to 900,000 lb. of steam per hour predominate and steam pressures of 700, 900, or 1200 lb per square inch are employed. There is also a decided trend toward higher steam temperatures of the order of 875 to 925 degrees F, advances in metallurgy having provided suitable materials for superheaters, piping, valves, and fittings to withstand such temperatures satisfactorily. With few exceptions, these large boiler units are being fired with pulverized coal and the slagging type of furnace is being employed in many cases. For boilers of capacities under 250,000 lb. of steam per hour either stokers or pulverized coal are being used, depending upon the coal available and local conditions or preferences.

The reliability of large modern boilers is now comparable to that of the turbines and this has resulted in the unit plan of one boiler per turbine being adopted in several instances, notably the new Port Washington Station of the Milwaukee Electric Railway, Power & Light Company which went into service during the Fall of 1935. This plant has a single boiler capable of supplying 690,-

000 lb. of steam per hour at 1200 lb. pressure to an 80,000 kw turbine generator.

During the year an extension to the capacity of Richmond Station in Philadelphia went into operation. This involved the installation of 165,000 kw capacity in space originally occupied by 50,000 kw. It consisted of a 165,000 kw turbine-generator and two 600,000-pounds per hour boilers.

A survey of investment and operating costs in 16 representative steam central stations, ranging in capacity from 15,000 kw to 200,000 kw, was recently made by *Electrical World* and published in the November 23d issue. This showed the total cost of power produced by these stations to range from 4.17 mills to 14.85 mills per kw-hr with an average of 8.2 mills. Fixed charges averaged 4.9 mills and the production charges 3.3 mills. That is, approximately 60 per cent of the cost was made up of fixed charges on the plant and 40 per cent covered fuel, labor, maintenance, and supplies. Of this 40 per cent, fuel accounted for 60 per cent. Hence of the total cost, fuel comprises 24 per cent. These figures do not, of course, include distribution costs, sales expense, taxes, nor administrative overhead. The heat rate of these stations ranged from 11,600 to 22,800 B.t.u. per kw-hr generated, thus covering a wide spread in overall efficiencies.

PRAIRIE PROVINCES. The general name applied to the three Canadian provinces of ALBERTA, MANITOBA, SASKATCHEWAN. See CANADA.

PRATT INSTITUTE. A nonsectarian educational institution in Brooklyn, N. Y., founded in 1887 and composed of four schools: Fine and applied arts, household science and arts, science and technology, and library science. The 1935 autumn enrollment was 4430. There were 188 members on the faculty and 13 special lecturers. The library contained 145,000 volumes. President, Frederic B Pratt, A.M., LL.D.

PRESBYTERIAN CHURCH IN THE UNITED STATES OF AMERICA. This is the largest body of the Presbyterian communion, being represented by churches in every State of the Union and having official mission stations in Alaska, Cuba, Puerto Rico, and 16 other foreign lands. In 1935 its churches in the United States and abroad were organized into 44 synods and 282 presbyteries. Statistics for the year ending Mar. 31, 1935, showed a total communicant membership in full standing of 1,959,923, with adherents numbering approximately 5,000,000. The Sunday school enrollment totaled 1,568,876. The number of churches was 9025 and of ministers, 9901. Contributions during the year amounted to \$35,718,531, of which \$29,245,506 was for current expenses and \$6,473,025 for benevolences. The board of national missions received \$2,215,302; the board of foreign missions, \$2,071,957; and the board of Christian education, \$438,528, all from living givers. The church maintains 53 colleges, 12 theological seminaries, and 2 training schools for lay workers. It publishes three national official periodicals, *Monday Morning, Everyone*, and *Women and Missions*. Three periodicals, *The Presbyterian*, *The Presbyterian Banner*, and *The Presbyterian Tribune*, are privately owned and have unofficial standing.

The 1935 general assembly was held in Cincinnati, Ohio, May 23-29, 1935. The Rev. Joseph Anderson Vance, D.D., LL.D., pastor of the First Presbyterian Church of Detroit, and president of the board of national missions, was elected moderator; the Rev. Albert I. Good, missionary to the Cameroon, West Africa, was appointed vice

moderator. Like other recent general assemblies of the Church, the 1935 assembly issued definite and vigorous utterances on social questions. It reaffirmed former assembly deliverances on the subject, and declared for "adequate unemployment relief," "social insurance against social hazards, illness and old age," "moral force instead of barbaric methods of violence," opposition to child labor, approval of the membership by the United States in the International Labor Organization, opposition to "the growing sentiment in favor of legalized gambling," condemnation of lynching, "reinvigoration of rural communities with spiritual life and social passion," and other social methods and purposes. The assembly authorized its commissioners from the Presbytery of Washington City to present to the German ambassador, in the name of the assembly, a letter regarding recent reports of an antagonistic attitude in Germany to the churches of the Reich, stating that the members of the Presbyterian Church in the U.S.A. "are deeply aroused over the apparent threat to the very substance of the Christian religion." It also sent to the leaders of the Confessional Synod in Germany a message of encouragement. Plans were approved for celebrating in 1938 the sesquicentennial of the general assembly, and in 1937 the centennial of the board of foreign missions.

The Church has its headquarters, including the offices of the general assembly and the general council, in the Witherspoon Building, Philadelphia, Pa., in charge of the Rev. Lewis Seymour Mudge, D.D., LL.D., stated clerk. The board of Christian education and the board of pensions also are housed there, while the board of foreign missions and the board of national missions are located in the Presbyterian Building, 156 Fifth Avenue, New York City.

PRESBYTERIAN CHURCH IN THE UNITED STATES (SOUTH). This division of the Presbyterian denomination covers the territory commonly known as the Southern States. It was composed in 1935 of 17 synods and 88 presbyteries, with 3545 organized churches, 2460 ministers, and 477,467 members. The ruling elders numbered 16,341 and deacons, 18,555. Contributions for current expenses amounted to \$6,626,358, and for benevolences to \$2,459,710. In 1935 the church was supporting 395 missionaries in Africa, Brazil, China, Japan, Korea, and Mexico; these missionaries were assisted by 4338 native workers. In the six countries there were 69,956 church members and 115,743 Sunday school members.

The church maintains 4 theological seminaries, 1 training school for lay workers (white), 2 training schools for colored people, 16 colleges, 10 junior colleges, 10 secondary schools, 10 mountain schools, 2 Mexican mission schools, and 16 orphans' homes and schools. It publishes the *Presbyterian Survey*, which is the medium of communication of all departments with the membership of the church. Privately owned papers of the denomination are the *Christian Observer* and the *Presbyterian of the South*.

The general assembly met in Montreat, N. C., May 30, 1935. The Rev. Henry H. Sweets, D.D., of Louisville, Ky., executive secretary of Christian Education and Ministerial Relief, was elected Moderator. The offices of the general assembly are at 722 Kirby Bldg., Dallas, Tex. The Rev. J. D. Leslie, D.D., who was stated clerk, died June 11, 1935, and the Rev. E. C. Scott, D.D., succeeded him by appointment of the Moderator.

PRESBYTERIAN CHURCH OF NORTH AMERICA, UNITED. A member of the family of Presbyterian churches, of Secession and Covenant origin, formed by the union in Pittsburgh, Pa., in 1858 of the Associate and Associate Reformed Churches.

The general assembly of the church convened in Akron, Ohio, on May 22, 1935. On that date there were reported in the United States 11 synods, 55 presbyteries, 875 congregations, 881 ministers, 5173 ruling elders, and a church membership of 179,338. The total membership, including missionary fields, was 243,593. The Sabbath school enrollment was 175,620, while the young people's societies numbered 1093 with a membership of 27,329. Contributions for the year 1934-35 totaled \$3,455,126, and missionary contributions \$882,246.

Strong action was taken by the Assembly in support of all accredited agencies working for the return of Prohibition. A Special Committee was appointed to work in cooperation with other bodies in a serious effort to introduce to Christ the 20 million boys and girls in America between 4 and 18 years of age who are receiving no Christian training.

The denomination supports 352 men and women in four foreign mission fields and 296 men and women in homeland mission fields. It carries on medical work in 29 foreign hospitals and dispensaries, conducts educational work in 353 schools at home and abroad, and in 1934-35 reached and influenced the lives of more than 32,000 young men and women in its schools and colleges. The colleges in the United States are: Westminster College at New Wilmington, Pa., Muskingum College at New Concord, Ohio, Monmouth College at Monmouth, Ill., Tarkio College at Tarkio, Mo., Sterling College at Sterling, Kans., and Knoxville College at Knoxville, Tenn. Denominational journals are the *United Presbyterian*, for adults, and the *Christian Union Herald*, for young people.

The moderator of the general assembly of 1935 was the Rev. E. C. McCown, D.D., of Pittsburgh, Pa. The Rev. O. H. Milligan, D.D., of Avalon, Pa., was stated clerk. Headquarters of the Board of Administration are at 705 Publication Bldg., Pittsburgh, Pa.

PRIESTLEY MEDAL. See CHEMISTRY.

PRINCE EDWARD ISLAND. A Province of Canada. Area, 2184 sq. miles; population (1935 est.), 89,000 compared with 88,038 (1931 census). During 1934, there were 1943 births, 1033 deaths, and 536 marriages. Chief towns (with 1931 populations): Charlottetown, the capital (12,361), Summerside (3914). In 1933, there were 476 schools with a total of 18,397 students.

Production. The preliminary estimated value of field crops for 1935 was \$7,871,000 (\$9,054,000 in 1934) of which hay and clover (263,000 tons) accounted for \$2,506,000; potatoes (152,250 tons), \$2,132,000; oats (4,777,000 bu.), \$1,720,000. Livestock in 1934: 96,800 cattle, 54,100 sheep, 31,500 swine, and 27,430 horses. The fisheries catch (1934) was valued at \$963,926 of which lobsters represented \$674,186; cod, \$84,445; oysters, \$60,061. Fur production (1933-34) 14,452 pelts valued at \$540,355 of which silver fox (13,088 pelts) accounted for \$532,960. In 1933, from the 263 factories, with 1065 workers, the value of products was \$1,485,516 net.

Government. For the fiscal year ended Dec. 31, 1935, revenue amounted to \$1,914,671; expenditure, \$2,997,399; public debt, \$5,221,746;

sinking funds, \$1,114,033. Government was administered by a lieutenant-governor and a legislative assembly of 30 members elected for four years by popular vote (30 Liberals were elected at the Provincial general election of July 23, 1935). The Province was represented in the Dominion Parliament at Ottawa by 4 Senators and 4 members in the House of Commons (4 Liberals were elected at the Dominion general election of Oct. 14, 1935). Lieut.-Gov., G. D. DeBlois; Premier, T. A. Campbell. See CANADA under *History*.

PRINCETON UNIVERSITY. A nonsectarian institution of higher learning for men at Princeton, N. J., founded in 1746. The total enrollment in the autumn of 1935 was 2569, of whom 2295 were undergraduates and 274 were graduate students and fellows. The faculty numbered 319. The endowment in 1935 was \$26,929,810.18; the total operating income, \$2,825,078.72; and the total operating expenditures, including reserves, \$2,750,498.75. Requests and gifts amounted to \$304,154.58 for endowment, \$143,270.79 for current expenses, \$16,401.10 for student aid, \$100,627.87 for buildings, and \$4650 unallocated. The library in 1935 contained about 720,000 volumes, exclusive of pamphlets, broadsides, and manuscripts. President, Harold Willis Dodds, Ph.D., LL.D., Litt.D.

PRISON LABOR. See CRIME.

PRIVATE LAW. See LAW.

PROCEDURE. See LAW.

PROCESSING TAXES. See UNITED STATES under *Administration*.

PROHIBITION. The Federal Alcohol Administration. Among the numerous agencies whose authority was destroyed by the declaration that the NRA was unconstitutional was the Federal Alcohol Control Administration, created by Executive Order 6474 on Dec. 4, 1933. Its powers were derived from the National Industrial Recovery Act. Under the provisions of H. R. 8870 (74th Congress Public 401, approved Aug. 29, 1935), the Federal Alcohol Administration was established as a division in the Treasury Department to replace the defunct organization, and all papers, records, and property of the latter were transferred to the new Administration.

Immediately on the signing of the act the Director of the expiring FACA issued a press release calling the attention of the members of the several alcoholic beverage industries to the fact that some of the provisions of the new law were effective immediately and that violation of them would entail the penalties described. Among these provisions were those prohibiting the establishment of exclusive outlets (known as "tied houses"); commercial bribery; consignment sales; alteration, mutilation, destruction, obliteration, or removal of labels; and interlocking directorates. The laws regulating bulk sales and bottling were also a part of the fundamental law, but the same exemptions were allowed as formerly, e.g. bulk sales to distillers, rectifiers of distilled spirits, wine makers, etc., were permitted. Various other matters, such as labeling, advertising, and the obtaining of basic permits were made points for administrative action.

During the period between the collapse of the authority of the FACA and the establishment of the FAA there was virtually no national regulation of the liquor business of the country. The Administrator of the new organization had, therefore, to start from the beginning and work out new plans. This task was given to Franklin C. Hoyt,

Mr. Hoyt was forced to resign as of Dec. 31, 1935, because of ill health. In his letter of resignation he said that,

Since I have been in office I feel that considerable progress has been made toward that end [working out the preliminary organization of the administration], although our activities, as you know, have been carried on under somewhat difficult circumstances. All of the permits to producers which under the provisions of the law had to be issued by November 23 have been passed upon, public hearings have been held and practically all the general regulations required by the act have been drawn and either adopted or proposed for adoption.

At about the same time as Mr. Hoyt's resignation was announced, it was also made known that in his report to Congress the retiring administrator would advocate that the FAA be made an independent bureau, entirely separate from the Treasury Department. This was interpreted as a move to simplify the activities of the Administration.

In explaining the FAA to the public, Administrator Hoyt summarized the law as follows:

The new act gives the Federal Alcohol Administration jurisdiction over distillers, wine-growers, importers, and wholesalers—the large-scale distributors—by providing a permit system under which a rigid supervision of those who enter the field of producing and distributing liquor can be exercised. These permits can be revoked after proper hearing by the administrator for violation of the law and his regulations.

The main purpose of the new act is to protect the public and the consumer from inferior and harmful products manufactured and marketed by unscrupulous liquor dealers. While it may not result in limiting the consumption of liquor, it will at least help to safeguard the consumer in respect to the quality of the goods he may buy and in large measure will prevent the entry of criminal disreputable and undesirable characters into the wholesale liquor trade.

It was also pointed out that fines can be levied for violations of the regulations of the Administration and that while limited personnel at present precludes the possibility of detecting all violations, it is presumed that few violators entirely escape because they are under the surveillance of tax-collectors, fellow dealers, and the general public. In the Administrator's opinion, entirely to control the situation would require that the personnel of the organization be increased from 140, as at present, to about 200. It is also the task of the Administration to prevent the shipping of liquor into bone-dry States, and the shipment of "hard" liquors into States permitting wines and beers only. While the organization has comprehensive powers over bad trade practices, it is not concerned, as was its predecessor, with price fixing.

Liquor Revenues. In early December, Secretary of the Treasury Morgenthau announced that the levies collected on distilled spirits, beer and wine from December, 1933, through October, 1935, amounted to \$772,577,452, and the November receipts were expected to push the figure of the eight hundred million mark. During the same 23 months, customs collections on liquor imports were in excess of \$77,000,000. In an intensive drive to obtain greater collections from the liquor traffic, the Treasury started strict supervision of retail stores in cities of more than 100,000 population, using unemployed "white collar workers" and the inspectors of the Alcohol Tax Unit. This drive was a success. The Department also cooperates with local governments in enforcing all liquor laws.

Distilled spirits withdrawn from bonded warehouses for consumption during the 1934 fiscal year totaled 38,459,023 gallons, and increased to 75,072,993 gallons in the 1935 fiscal year. On Sept. 30, 1935, there were 175,885,829 gallons of whiskeys of various types stored in bonded warehouses, an increase of over 84,000,000 gallons since Dec.

31, 1934. While consumption is on the increase, the Treasury officials calculate that last year's consumption was but 70 per cent of that of 1917, the peak of pre-prohibition years. In announcing the figures, Secretary Morgenthau said that:

The collection of revenue has been heavy. The production of bootleg liquor has decreased. The price of liquor has gone down. The quality has improved. Overseas smuggling is almost nil.

The Bootleg Industry. There is, however, another side to this picture. Aerial rum patrols are maintained on the Canadian and Mexican borders, and Coast Guard cutters are constantly on the alert for rum runners off the sea coasts. Moreover, the manufacture of bootleg liquor still goes on within the country and finds a ready market in the big cities. Counterfeit labels and revenue stamps are turned out by the thousands. What proportion of the liquor actually consumed in the United States (not reflected in the figures cited above) is bootleg is impossible to say, but some figures issued by the office of the Commissioner of Alcoholic Beverage Control of New Jersey give an insight into the extent of the illicit traffic.

During the first 10 months of 1935, the operatives of this office seized 389 stills with a capacity of 161,385 gallons; 10 cleaning plants in which denatured alcohol is "washed" with ether, chloroform and caustic soda; 7 rectifying plants; 58,549 gallons of alcohol which the bootlegger would expand into approximately 234,000 gallons of vendible liquor; 15,383 gallons of wine and 1,643,176 gallons of alcohol mash. These figures, of course, merely indicate the quantity discovered and seized in one State of the union. Joseph Choate, Jr., Administrator of the defunct FACA, estimated that 50,000,000 gallons were consumed untaxed in the first year of repeal. There are indications that the situation has materially changed during the second year. But it is known, on the other hand, that liquor smuggling has experienced something of a revival.

Under the dateline of Nov. 20, 1935, the *New York Times* carried a story in which it was asserted that Antwerp, Belgium, was rapidly becoming the headquarters of the international bootleggers catering to the American trade. Using Antwerp as a base, liquor is ostensibly shipped to Newfoundland, and then transferred at sea to rum-runners who land it in the United States. As an example, the story cited the case of a Norwegian tramp steamer which was loaded at Antwerp with 21,000 cases of pure alcohol consigned to St. John's, Newfoundland. This represented 500,000 quart bottles of whisky when cut, labeled, and treated. The steamer was under charter by a Halifax, Nova Scotia, company identified with rum-running and the cargo was transferred at sea to rum-runners. The steamer was fined \$500 on arrival at St. John's for violating the technical rule governing "breaking bulk," an offense against international shipping rules.

Not only is the continued distribution of bootleg liquor a menace to health, but it is also a disastrous competitive factor in the legitimate liquor trade. A competent authority presents the figures as follows:

As it stands, the Federal tax is a protective tariff for the bootlegger. Alcohol costs the legitimate dealer only 20 cents a gallon to produce because he produces in great bulk. But it bears a Federal tax of \$2 and a State tax of \$1 per gallon—a tax of 1500 per cent. Add to this the expense of distribution and the reasonable profits of the distiller, the wholesaler and the retailer, about \$1.27, and the minimum price at which legitimate alcohol may reach the consumer is \$4.47. The bootlegger sells it for \$2.50 a gallon.

Fair competition is out of the question. As long as these high taxes remain the differential between legitimate and illicit industry is a standing invitation to violate the law.

A second aspect of the situation is the constancy of the number of prisoners committed to Federal jails for violations of the liquor laws. Mr. Sanford Bates, director of the Bureau of Prisons, reported on this latter for 1935 as follows:

The relief which we expected to come from the repeal of prohibition has not materialized. During the year 1932, when the enforcement of the liquor laws under the Department of Justice was at its height, nearly 50 per cent of those committed to Federal institutions were sent there for liquor law violations. For 1935 the proportion is nearly as large as it was during the prohibition days.

The Repeal Debate. It is but natural that the argument over the meaning of the repeal of prohibition should continue unabated and that contradictory statements should be made from time to time. A typical pro-repeal statement was that issued by J. M. Doran, Administrator of the Distilled Spirits Institute, Inc., on the occasion of the second anniversary of repeal. He listed as benefits:

- 1 Increased receipts to the Federal Treasury and to State governments where sales are legal.
2. A corresponding reduction in the operations of bootleggers who, during the first year of repeal, were said to have sold 50 per cent of the liquor consumed by the public.
- 3 Fourteen additional States by statute turned from a situation of no control of the liquor traffic to legalization of sales and strict enforcement.
4. The Federal Congress met the desire of our industry by adopting a vigorous statute to take the place of control imposed by the code system.
- 5 Greater stabilization of the industry in plant operation and marketing methods which have resulted in improved quality of the product and a corresponding reduction in the price level.
6. Fragmentary statistics quoted from time to time relative to increased accidents are somewhat surprising inasmuch as in many instances greater percentage increases are shown, both with respect to accidents and deaths from alcoholism, in dry States than in the more populous States where control is exercised over the beverage liquor traffic. In attempting to draw conclusions from fragmentary accident statistics, apparently no account is taken of the increased population, the increased number of cars and trucks in operation and the much greater speed of the motors as compared with three years ago. The accident curve appears to reach its top on Sundays, and it is difficult to attribute this top figure to drunken driving.

This may be taken as a "brief" for one side. Equally indicative of conditions, and far more impartial, are figures issued by the Census Bureau on the number of deaths from alcoholism. The study extends over a number of years and from it it is possible to discover that the high point of such deaths occurred in 1913 when the rate was 5.9 per 100,000 population, followed by a slump, and a rise to 5.8 in 1916. The figure once more declined and during prohibition never reached a point higher than 4 deaths per 100,000 population. The figure for 1933, the last year yet available, was 2.6. There is considerable variation among the several States. Nevada, for example, reached the highest rate on record in 1929 with 26.6. As between 1933 and 1934, the States showing the largest individual increases (national average not available) were technically dry States, Georgia, North Carolina, Oklahoma, and Texas. On the other hand, in a wet State like New York, the year 1934 marked an abrupt decline in the number of deaths from alcoholism.

Closely related to these figures, although not concerned with death, is the statement of the Secretary of the Keely Institute, a "drink cure" establishment, to the effect that there was a 14 per cent increase in the number of women patients during the first 10 months of 1935. Of these 77 per cent were housewives and the 23 per cent remain-

ing school teachers, nurses, bookkeepers, saleswomen, office workers, and restaurant keepers. This would seem to indicate that the home is a very unsafe place. In this connection it is interesting to observe that the Alcohol Commissioner of New Jersey released a statement early in December condemning the advertising for sale of small liquor flasks that "fit the purse."

Under the stimulation of these very contradictory facts and figures the "drys" are once more about to launch a campaign for a prohibition amendment under the leadership of the Women's Christian Temperance Union and the Methodist Board of Prohibition and Public Morals. Although relying to some extent on carrying on the fight under the local option laws, chief attention will be concentrated on Congress. It is hoped to make a beginning by drying up the national capital and the sympathetic cooperation of Representative Guyer and Senator Capper, both from Kansas, has been enlisted. The nation-wide campaign has been assigned to the National Temperance and Prohibition Council which embraces all the dry organizations. It is calculated that the nation is divisible into thirds: Dry, wet, and neutral. Late in December the Anti-Saloon League let it be known that it, too, would soon be active in the campaign again. Dr. F. Scott McBride, Superintendent, issued the following list of points to be stressed by the workers:

No promise of the wets to regulate liquor has been kept. Drinking and drunkenness have increased decidedly everywhere, returning the "staggering drunk" to the streets. Automobile and other accidents caused by alcohol "have made repeal the bloodiest period in our peacetime history." The bootlegger has remained, furnishing more than half the hard liquor consumed since repeal.

The cocktail hour and other drinking schemes have proved "a greater menace to women and girls than the old-time saloon ever did to men and boys."

One distillery has advertised a "mild" whisky for women, saying as many women as men would be drinking whisky in 25 years, thereby breaking a wet "promise" to sell liquor only to those who would drink anyway.

Revenues from liquor are "less than the relief money squandered for liquor," but "repeal is impoverishing both labor and the farmer," and the public must pay for damage and crime caused by alcohol.

Corruption has increased and "Legislatures have again become submissive to liquor." The saloon has returned—"the better wets are moving toward the saloon as an improvement over present conditions."

Repeal has undermined the veracity of political leaders.

At the same time Mr. McBride stated that over 2000 different local governmental units had voted dry during the past two years; that in his opinion a majority of the States would be dry by their own action in 1940; and that "with an aggressive campaign" 40 States can be dry in 1945. He pointed out that in recent State-wide contests on the issue, the drys won in Mississippi, North Dakota, Kansas, Alabama, and Georgia. At present but seven States are legally dry: Alabama, Kansas, Oklahoma, Georgia, Mississippi, North Dakota, and Tennessee. Florida, Texas, and North Carolina are partly dry. Mr. McBride did not specify which seven States would remain wet even after 1945.

That the hopes of the professional drys are not figments of heated imagination is indicated by a statement of the chairman of the New York State Liquor Authority, Edward P. Mulrooney. According to Mr. Mulrooney, three trends are observable: (a) a growing indifference on the part of the public about safeguarding the fruits of repeal; (b) strenuous efforts on the part of certain liquor interests to circumvent or nullify the liquor regulations; and (c) the increase of dry sentiment. While commenting on the fact that in certain re-

spects there had been an improvement in consumption habits, all was not well. He instanced, however, the fact that whereas in 1932 three and a half truck loads of empty whisky bottles were removed from Yankee Stadium after each football game, in 1935 this had been reduced to half a truck load. Yet it is on the heavy drinking of football crowds that dry critics have based many of their statements. There is also widespread criticism of increasing drunkenness among very young women. Summing up his impressions, Mr. Mulrooney said:

Reports indicate the never-ceasing activity of the dry sentiment, and if the apathy of the general public is to continue, unquestionably the dries will make definite inroads and endeavor to restrict many of the privileges now enjoyed by the people of the State.

In an effort to control the situation, the State Liquor Authority has initiated a temperance campaign, utilizing booklets, colored posters, and official speakers as the occasion offered.

PROLETARIAN LITERATURE. See LITERATURE, ENGLISH AND AMERICAN.

PROPERTY. See LAW.

PROTESTANT EPISCOPAL CHURCH.

During the year 1935 the Episcopal Church observed the centennial, and in some instances the sesquicentennial, anniversaries of significant events in the life of the Church. Of foremost importance was the centenary of the great missionary General Convention of 1835. Under the leadership of George Washington Doane, second Bishop of New Jersey, and other churchmen of that time, the Convention of 1835 squarely faced the missionary task of the Church; reorganized the little voluntary missionary society that had been begun in 1821 by declaring that the Church itself is the missionary society and that all baptized persons are members thereof; elected the first domestic Missionary Bishop; appointed the first missionaries to Liberia; and provided for the publication, beginning in January, 1836, of a monthly missionary magazine, *The Spirit of Missions*.

The year 1935 also marked the centenary of the departure of the Church's first missionaries to China, Francis R. Hanson and Henry Lockwood. This anniversary was marked in China by special services in all parishes and missions in the three Dioceses of Shanghai, Anking, and Hankow, of the Chung Hua Sheng Kung Hui (Holy Catholic Church in China), and a great union service of thanksgiving in the Church of Our Saviour, Shanghai. Chinese churchmen in the three dioceses also made a thank offering to the Church in America for the blessings of the Gospel and the nurturing care received during the past century.

The celebration of the 150th anniversary of the first General Convention held at Philadelphia, Sept. 27 to Oct. 7, 1785, brought to America two distinguished guests from England, the Rev. Stacy Waddy, Secretary for the Society for the Propagation of the Gospel in Foreign Parts, and Sir Edward Midwinter, K.B.E. In December, 1935, not only the Church in America but the nation had the privilege of welcoming a third distinguished guest, the Most Rev. William Temple, Archbishop of York.

The Forward Movement inaugurated by the appointment of a commission headed by the Rt. Rev. Henry Wise Hobson, Bishop of Southern Ohio, at the General Convention of 1934, began its work early in 1935.

The House of Bishops at its annual session in Houston, Texas, Nov. 5-7, 1935, faced missionary

problems of first magnitude when called upon to elect Missionary Bishops for North Tokyo and Liberia, and to seek a solution to administrative problems in the Missionary District of Idaho. The House accepted with expressions of genuine regret the resignations of the Rt. Rev. John McKim as Bishop of North Tokyo on account of age, and of the Rt. Rev. Robert E. Campbell as Bishop of Liberia because of impaired health. Bishop McKim's resignation brought to a close 56 years of missionary activity in Japan, of which 42 were spent as Bishop. His service covered the entire life-span of the Nippon Sei Ko Kwai (Holy Catholic Church in Japan) of which he had been for many years Presiding Bishop. The House elected the Rt. Rev. Charles S. Reifsnider, Suffragan Bishop of North Tokyo, a veteran of the Japan Mission and long distinguished in the educational life of the Empire, as Bishop McKim's successor. The Very Rev. Leopold Kroll, Dean of Holy Trinity Cathedral, Port au Prince, Haiti, and formerly a missionary in the Hawaiian Islands, was elected Bishop of Liberia. His consecration on Feb. 20, 1936, will be within a month of the centenary of the inauguration of the Liberia Mission.

The Missionary District of Idaho, vacant since the translation of the Rt. Rev. Middleton S. Barnwell to Georgia, was divided. The northeastern "panhandle" of the State was transferred to the Missionary District of Spokane. It was impossible at this time to add the southern part of Idaho to the Missionary District of Eastern Oregon. The House, therefore, transferred the Rt. Rev. Frederick B. Bartlett, Missionary Bishop of North Dakota and Executive Secretary of the Department of Domestic Missions of the National Council, to Southern Idaho.

The House of Bishops also accepted the resignations of the Rt. Rev. Albion W. Knight as Bishop Coadjutor of New Jersey, the Rt. Rev. Charles E. Woodcock as Bishop of Kentucky, the Rt. Rev. Charles Fiske as Bishop of Central New York, and the Rt. Rev. Wilson R. Stearly as Bishop of Newark.

Other changes in the membership of the House of Bishops during 1935 were occasioned by the deaths of the Rt. Rev. Thomas F. Gailor (q.v.), Bishop of Tennessee and sometime President of the National Council, who was succeeded by his Coadjutor, the Rt. Rev. James M. Maxon; the Rt. Rev. Edward Fawcett, Bishop of Quincy; the Rt. Rev. Walter T. Sumner, Bishop of Oregon; the Rt. Rev. Samuel B. Booth, Bishop of Vermont; and the Rt. Rev. Ralph E. Urban, Suffragan Bishop of New Jersey. Late in 1935 some of these vacancies were filled by elections but no consecrations were scheduled until early 1936.

In 1935 the total number of communicants of the Episcopal Church in 8098 parishes and missions, was 1,389,592, an increase of 26,178 over the preceding year. The clergy numbered 6410; 162 priests were ordained during the year, while the 15 theological seminaries of the Church reported 426 candidates for orders. In the 5000 Church (Sunday) schools, 506,400 pupils were enrolled. Baptisms during the year numbered 63,056 and confirmations 67,096. The government of the Church centres in a General Convention which meets triennially, the next session (the 52d) to be held in Cincinnati, Ohio, in October, 1937. The affairs of the Church between sessions are conducted by a National Council composed of 28 members.

During 1935 the National Council was forced to carry on its world-wide work on a curtailed emergency budget of \$2,313,000. Work in Dornakal, India, inaugurated in 1933, was strengthened late in 1935 by the sending out of an agricultural missionary. American missionaries abroad numbered 407; native staff abroad, 1508. During the year 8 new missionaries were appointed.

The headquarters of the National Council, which is the board of directors of the Domestic and Foreign Missionary Society, are in the Church Missions House, 281 Fourth Avenue, New York. The chairman of the board is the Presiding Bishop, the Rt. Rev. James DeWolf Perry, of Rhode Island, and the president is the Bishop of Delaware, the Rt. Rev. Philip Cook.

PROTOZOA. See ZOOLOGY.

PRUSSIA, prűsh'a. A constituent Republic of Germany which by a law of the government of the Reich of Apr. 7, 1933, was placed under the absolute rule of a governor (statthalter) who appoints the cabinet. Area, on June 16, 1933, exclusive of the Saar (574 sq. m.), 114,120 sq. miles. Total population (June 16, 1933), 39,934,011. The budget for the year ended Mar. 31, 1936, was balanced at 2,001,000,000 reichsmarks; for 1934-35, 2,094,403,790 reichsmarks. On Apr. 1, 1934, the public debt amounted to 715,871,434 reichsmarks. Governor, Adolf Hitler; Prime Minister, Hermann Goring. See GERMANY.

PSYCHICAL RESEARCH. The last year was one of re-action, and that for many reasons. The previous year had been one of unusual activity and publication, and there was much, consequently, to be digested and tested. In addition, there was a reaction from a change in personnel in both America and England. In America the death of Dr. Walter Franklin Prince was a serious blow, from which the Boston Society for Psychic Research has not yet fully recovered. They have gone a long way, however, by appointing to succeed Dr. Prince one whose work has attracted much attention lately, Dr. J. B. Rhine, of Duke University. In England, Theodore Besterman resigned from his post as Investigation Officer of the Society for Psychical Research, which is now attempting to carry on its work by means of a Research Committee. It is too soon to judge of the results, but it is earnestly to be hoped that this venerable and valuable Society will maintain its activities unimpaired. The S.P.R., as it is affectionately known, has to give a lead to the rest of the students of the subject, and not content itself with following in well-trodden paths; and at the same time it must not concentrate too much on any one aspect of psychical research.

Another outward change during the year was the windingup of the so-called National Laboratory for Psychical Research, in London, the organization of Mr. Harry Price. It cannot be pretended that this was a serious loss, and it was odd to see this body taken over by a University of London Council for Psychical Investigation, even though this is wholly unofficial and extra-academic, as briefly announced last year. This Council has now existed for a year, during which period it has given no sign of life.

Now let us turn to research reactions. The important experiments of Dr. Rhine in telepathy and clairvoyance have had widespread repercussions. Several investigators have repeated his experiments and have tried to obtain his results, but so far without success of any significance. The S.P.R. has published reports on several of these efforts. Hence Dr. Rhine's observations remain as inex-

pliable as ever, and are still quite unique. Efforts must be redoubled to localize the precise cause that enabled him to obtain such an enormously high and so greatly diffused percentage of paranormal perception in his subjects.

Mr. Whately Carington has continued the researches described last year. In a further report in the *Proceedings* of the S.P.R. he studied the control experiments of Theodore Besterman and Oliver Gatty, and frankly acknowledged that his original view "was quite evidently wrong." This result, however disappointing to those who thought that the scientific proof of survival had been approached, if not attained, is nevertheless to be welcomed. It shows that psychical research is growing up, that we are willing to admit our mistakes, and thus much more seriously than before aspiring to the status of true scientific work. At the same time, Mr. Carington believes that there is still valid material in his researches and is continuing his work.

One of the most interesting researches of the year was one by Mr. E. S. Thomas, an Oxford anthropologist. He studied the evidence for the fire-walk, according to which it is claimed of a number of peoples that they are able, in certain cases and in certain circumstances, to walk barefoot, without injury, over live, red-hot wood, charcoal, etc. Mr. Thomas did not content himself with studying the evidence, he tried to repeat it in his own person. He accordingly filled a trench with embers and walked across them, first in his shoes, and then in socks, without experiencing appreciable discomfort. However, the conditions were not altogether comparable.

The Earl of Balfour published a very lengthy study, in the *Proceedings* of the S.P.R., of the psychological aspects of the mediumship of Mrs. Willett. His argument is elaborate and likely to be of interest only to very advanced students of psychical research in its most recondite aspects.

Other publications of the year include, in rough chronological order: Malcolm Grant, *A New Argument for God and Survival*; Mrs. W. H. Salter, *Evidence for Telepathy*; J. Arthur Hill, *Experiences with Mediums*; Joseph J. Williams, *Psychic Phenomena of Jamaica*; Boston Society for Psychic Research, *Walter Franklin Prince. A Tribute to His Memory*; Frau von Moser, *Okkultismus. Tauschungen und Tatsachen*; Gertrude Ogden Tubby, *Psychics and Mediums*.

PSYCHOANALYSIS. See PSYCHOLOGY.

PSYCHOLOGY. An outstanding trend of the past year has been the convergence of psychological approaches, both near and remote, upon social problems. Coupled with this interest in applications there has been a consolidation of the more strictly theoretical lines of thought. The flood of psychological literature is certainly undiminished, and memberships in professional organizations continue to mount at a spectacular rate. It is also evident that the objective and experimental nature of psychological investigations is now taken for granted; significant pronouncements of psychologists are expected to have the laboratory behind them. Summing up these trends one may conclude that psychology as an academic discipline has gained during the past year in prestige and in self-assurance.

Child Psychology. Basic studies of child development, especially of the early years, continue to appear in large numbers. In the United States, where child psychology is a relatively recent interest, attempts to establish developmental norms

were particularly in evidence. E. Dewey published a survey of literature since 1920 on *Behavior Development in Infants* (New York: Columbia University Press) which discloses the special interest of investigators in prenatal development. *Observation of Young Children*, by L. C. Wagoner (New York: McGraw-Hill), contains nearly a hundred schedules for suggested laboratory observations. The experimental work of M. B. McGraw and others in infant behavior, which received much publicity while in progress, appeared under the title *Growth: A Study of Johnny and Jimmy* (New York: Appleton-Century). This investigation of selected twins, which also involved 68 other children, covered two years of life, and in many ways confirmed previous findings in regard to maturation. J. A. F. Roberts furnished a summary of present knowledge about twins ("Twins," *Eugenic Review*, Vol. 27, pp. 25-32). "Twin Investigations in the U.S.S.R.," by S. G. Levit (*Character & Personality*, Vol. 3, pp. 188-193), gives an account of the extensive Russian research, which has been especially vigorous. Another book emphasizing norms and covering most of the preschool period was I. N. Kugelmass' *Growing Superior Children* (New York: Appleton-Century). *Guiding Your Child through the Formative Years*, by W. deKok (New York: Emerson Books), is similar in scope. G. Adams' *Your Child Is Normal* (New York: Covici-Friede) is designed to counteract the stress lately laid upon maladjustment and conflicts in child development. A like point of view characterizes the treatment of the later years of childhood by E. S. Conklin in *Principles of Adolescent Psychology* (New York: Holt). In England, R. Griffiths contributed *A Study of Imagination in Early Childhood* (London: Kegan Paul), outlining the function of imagination in mental development, and making use of drawings by children, the Rorschach procedure, and similar material. *Glands and Efficient Behavior*, by F. Mateer (New York: Appleton-Century), is a non-technical consideration of glandular therapy in relation to children's behavior problems.

Cultural and Social Psychology. Of importance to social psychologists was the *Encyclopaedia of the Social Sciences*, edited by E. R. A. Seligman and A. Johnson (New York: Macmillan), now complete with the publication of Vols. 13-15 and the index. Another extensive undertaking was the English translation of V. Pareto's treatise on general sociology, *The Mind and Society* (four volumes; New York: Harcourt, Brace). This work, many years in preparation, emphasizes somewhat in the manner of Rignano, but far more diffusely, the irrationality of human thought and conduct. The numerous implicit psychological assumptions on which it is based were examined and criticized by W. McDougall ("Pareto as a Psychologist," *Journal of Social Philosophy*, Vol. 1, pp. 36-52), who pointed out the unhappy results of Pareto's lack of acquaintance with modern psychology.

Social problems are being brought more definitely into psychological focus. Continuing its interest in culture and personality, the Social Science Research Council appointed a committee to survey the frontiers of knowledge in respect to competitive and cooperative practices in the affairs of man. One objective of this investigation is to disentangle, so far as possible, "biological causation" from "cultural causation," a much disputed issue at the present time. Another basic problem, of peculiar interest in connection with nationalistic polit-

ical movements, was dealt with by O. Klineberg in *Race Differences* (New York: Harper). This book comprises a comprehensive investigation of racial characteristics and differences, as established by the several biological sciences. The author concludes from his searching examination that cultural influences are of major importance in accounting for racial variations. This point is also admitted by some European investigators, but deductions of "Aryan" superiority are also often made by those working under the surveillance of political interests, as is illustrated by L. J. Bykowski's "Untersuchung des intellektuellen Niveaus der arischen und Jüdischen Schüler in den polnischen Gymnasien" (*Zeitschrift für pädagogische Psychologie*, Vol. 36, pp. 38-40).

An outstanding contribution to the timely topic of influencing thought and behavior was made by L. Doob (*Propaganda*; New York: Holt), who gives a strictly psychological analysis of the factors involved, and an explanation of the successful techniques of propaganda. H. Cantril and G. W. Allport investigated an instrument important not only in propaganda but also in the diffusion of thought in a comprehensive volume entitled *The Psychology of Radio* (New York: Harper). H. L. Hollingworth contributed to the same sphere of interest *The Psychology of the Audience* (New York: American Book). The recent concern of psychologists with the moving pictures continued. Statistics on attendance at moving pictures and the content of scenarios were compiled by E. Dale (*The Content of Moving Pictures*; New York: Macmillan).

The literature of sexual study was enriched by the *Encyclopedia Sexualis*, edited by V. Robinson (London: Dingwall-Rock), as well as by an American handbook called *Encyclopedia of Sexual Knowledge*, edited by A. Costler (New York: Coward-McCann); an English translation appeared of P. Mantegazza's *The Sexual Relations of Mankind* (New York: Eugenic Publishing Company). Another book in this field was M. E. Harding's *Woman's Mysteries, Ancient and Modern* (New York: Longmans, Green) which, following the lead of Jung in employing the background of cultural history, sets forth in detail pertinent myths and legends. M. Mead continued her contributions with *Sex and Temperament in Three Primitive Societies* (New York: Morrow), which concerns three tribes of New Guinea. L. Levy-Bruhl's *Primitives and the Supernatural* was made available in an English translation (New York: Dutton). J. Jastrow's investigation of superstitions (*Wish and Wisdom: Chapters in Erratic Psychology*; New York: Appleton Century) is based upon the eccentric beliefs of civilized people.

An inclusive work on the psychology of industrial problems is *Psychologie van het Bedrijfsleven Problemen en Resultaten der Psychotechniek* by G. Révész (Haarlem: Bohn). H. Baker made a survey of the social-psychological problems of 50 department stores (*Personnel Programs in Department Stores*; Princeton, N. J.: Industrial Relations Section, Princeton University). Miscellaneous contributions to cultural psychology range from G. Wallas' *Social Judgment* (New York: Harcourt, Brace), an empirical and historical account of the judgment process, to *The Psychobiology of Language* by G. K. Zipf (Boston: Houghton Mifflin), which sets forth laws pertaining to the frequency of use of words and other verbal elements. In *Modern Mystics* (New York: Dutton), F. Younghusband emphasizes the ubiquity

of certain mystical experiences. Work in æsthetics included a general discussion, *Concerning Beauty*, by F. J. Mather (Princeton University Press), while G. T. Buswell's study, *How People Look at Pictures* (University of Chicago Press), deals largely with perceptual processes. A comprehensive application of psychological research to æsthetics was published by A. W. Melton (*Problems of Installation in Museums of Art*, American Association of Museums, N.S., No. 14, Washington, D. C.). D. H. Yates made a useful investigation of the activities of commercialized pseudo-psychologists (*Psychological Racketeers*; Boston: Humphries), and this subject was treated also by G. A. Farner ("Praktische Psychologie," *Zentralblatt für Psychotherapie*, Vol. 8, pp. 132-138).

Educational Psychology. Notable in the field of educational psychology was E. L. Thorndike's continued work in adult learning, which he summed up in *Adult Interests* (New York: Macmillan). This book presents detailed measures of performance of people 45 years old or older as compared with the accomplishments of younger individuals. New textbooks in the field include *Educational Psychology* by A. C. Eurich and H. A. Carroll (Boston: Heath); *An Introduction to Educational Psychology* by C. D. Griffith (New York: Farrar & Rinehart); *Psychology of Learning* by R. A. Davis (New York: McGraw-Hill); and *The Psychology of Learning* by E. R. Guthrie (New York: Harper).

The social problems of youth are receiving much attention. N. Miller treats the vocational, economic, environmental, and familial problems of girls in rural districts in the south in *The Girl in the Rural Family* (Chapel Hill, N. C.: University of North Carolina Press), and two studies on *Interests, Activities and Problems of Rural Young Folk*, dealing with girls and with boys, by M. B. Thurrow and W. A. Anderson, were issued by the Cornell University Agricultural Experiment Station.

General and Theoretical Psychology. The "totality" conception has continued to dominate psychological thought. The original nucleus underlying this "totality" conception, Gestalt Psychology, has developed steadily, and its progress was attested by two notable contributions: *Principles of Gestalt Psychology* by K. Koffka (New York: Harcourt, Brace) and *Gestalt Psychology* by G. W. Hartmann (New York: Ronald Press). The former book is especially important for its extension of the principles of Gestalt to topics not hitherto treated by the school, e.g., action, self-consciousness, and social groups. Hartmann reviews the whole movement and also forecasts the treating of psychiatric and educational problems from this point of view. Another "totality" approach which aroused much interest was set forth in *A Dynamic Theory of Personality* by K. Lewin (New York: McGraw-Hill), which comprises a number of experimental papers based on Lewin's "topological" method. This method is also employed by J. F. Brown in approaching in a novel way the problems of social psychology ("Towards a Theory of Social Dynamics," *J. Soc. Psychol.*, Vol. 6, pp. 182-213).

Still another aspect of "totality" psychology, that of personalistics, received thorough treatment by W. Stern in his *Allgemeine Psychologie auf personalistischer Grundlage* (The Hague: Nijhoff). The point of view of this systematic general psychology focuses attention not only upon the unitary nature of mental structures, but upon their personal nature as well. E. L. Thorndike's *The Psychology*

of Wants, Interests and Attitudes (New York: Appleton-Century) expresses a widespread interest on the part of American psychologists in dynamic factors.

The effect of bringing the "uncertainty principle" of physics into psychology was to initiate a new line of attack in theoretical problems, which has acquired the name of "operationism." According to this point of view, the concepts employed by any science need constant purging through a reference to the concrete operations from which each concept is derived. "It is clear that the examination of psychology's conceptual heritage under the searchlight of operationism needs to be undertaken seriously if we are to be rid of the hazy ambiguities which result in ceaseless argument and dissension" (S. S. Stevens, "The Operational Definition of Psychological Concepts," *Psychol. Rev.*, Vol. 42, pp. 517-527). An article by S. Hecht calls attention to the logic underlying this new movement ("The Uncertainty Principle and Behavior," *Harper's Magazine*, No. 1016, pp. 237-249). A further account, for psychology, was furnished by D. McGregor ("Scientific Measurement and Psychology," *Psychological Review*, Vol. 42, pp. 246-266), while a similar application was set forth in Germany by K. Popper (*Logik der Forschung*; Vienna: Springer). The resemblance of this trend of thought to the logical positivism of Carnap should not be overlooked.

Legal Psychology. One field which has long been recognized in Europe, especially in Germany, as a standard domain of psychology, is that of legal processes. This field, which has hitherto been limited in the United States to crime and criminality, was considerably extended during the past year. E. S. Robinson's *Law and the Lawyers* (New York: Macmillan) provided a comprehensive and critical survey of the psychological assumptions and implications of law and of legal procedure. In detailing the many shortcomings of jurisprudence this author urges that fictional or mythological assumptions concerning man and human institutions be replaced by facts. In *Law and the Social Sciences* (New York: Harcourt, Brace), H. Cairns also deals with these assumptions, but points out that the lack of unity in psychology is a hampering factor; *Law and the Social Order* by M. R. Cohen (New York: Harcourt, Brace) further prepares the groundwork for the legal psychology of the future.

Personality and Psychometrics. Factor analysis continues to loom large as a programme for investigating personality and human capacity. C. E. Spearman of London, originator of the factoring method, delivered a special lecture at the annual meeting of the American Psychological Association, presenting an account of new tests using the two-factor procedure. L. L. Thurstone published an inclusive account of his own method of factoring (*The Vectors of Mind*; University of Chicago Press). In *Essential Traits of Man* (Harvard University Press), T. L. Kelley presents still other methods. In general the effort at present is to evolve techniques that are simple enough to be practicable, and unambiguous in their results. Critics of the movement generally attack the obtained factors as meaningless, artificial products, not squaring with the "realities" of mental structure. In contrast to the factoring method, theories of personality based on different conceptions of traits are also being carried forward. There is, for example, the approach through the study of linguistic usage. G. W. Allport and H. S. Odbert have

classified and examined nearly 18,000 designations of traits in English (*Trait-Names: A Psycho-lexical Study*, Psychological Monographs, No. 208), presenting a theory of traits quite different from that advanced by factor-analysis.

A general study of individual differences was produced by D. Wechsler (*The Range of Human Capacities*; Baltimore: Williams & Wilkins). A somewhat similar but more restricted work, based on abilities of business executives, was *Psychometrics* by J. O'Connor (Harvard University Press). Testing of some sort is foundational to most American studies of personality and mental capacity. Although some psychologists cast doubt upon their efficacy, F. Kuhlman ascertained from a questionnaire sent to teachers and institutional staffs that more than half those addressed consider tests "essential and necessary for their work."

Psychopathology. In view of the growing popular belief that conditions of modern living cause an ever-increasing amount of maladjustment and insanity, Dr. Carney Landis of the New York Psychiatric Institute compared institutional figures on insanity for the past generation with population increase, extended life span, and rural and urban distribution of population. He concluded that there has been no appreciable increase in the incidence of mental disease due directly to the economic depression. Arteriosclerosis, a direct result of the prolongation of life, is chiefly responsible for the slight increase in insanity in recent years. A radical revision of current conceptions in psychiatry was proposed by G. Y. Rusk ("Gestalt Psychiatry," *J. of Abnorm. and Soc. Psychol.*, Vol. 29, pp. 376-384), C. M. Campbell in his book entitled *Destiny and Disease in Mental Disorders* (New York: Norton) deals especially with schizophrenia.

A clinical and psychological investigation of *Aphasia* was made by T. Weisenburg and K. E. McBride (New York: The Commonwealth Fund). The editors of *Fortune* contributed a popular survey of psychoneurotic conditions (*The Nervous Breakdown*; Garden City: Doubleday, Doran). A similar German treatment was presented by W. Niederland in *Nervosität! Jedermanns Krankheit* (Berlin-Lichterfelde: Falken-Verl.). Much interest was shown by the public in the "lie detector" because of its possible use in criminology; at the meeting of the American Psychological Association its chief sponsor, V. W. Lyon, declared in favor of the term "emotion detector" as a more appropriate designation for this composite measuring device. The work of H. Davis and F. A. Gibbs on cerebral action currents proved of special interest to psychopathology because of the definitive records obtained in epileptic conditions.

Historical notes on the development of the mental hygiene movement were brought together by W. L. Cross in a book called *Twenty-Five Years After*, the chronological reference being to the early activities of C. W. Beers, whose pioneer work, *A Mind that Found Itself*, was reissued in an anniversary edition by the National Committee for Mental Hygiene. A textbook on mental hygiene is *Mental Health*, by F. E. Howard and F. L. Patry (New York: Harper); another by E. W. Wallin is entitled *Personality Maladjustments and Mental Hygiene* (New York: McGraw-Hill). L. Kanner's *Child Psychiatry* was announced as "the first textbook of child psychiatry in the English language" (Springfield, Ill.: Thomas). One important trend is the increasing favor of psychiatry and mental hygiene among religious workers; some training in clinical psychiatry is now a part of the

curriculum in many of the theological seminaries.

Psychoanalysis is now beginning to close the gaps that hitherto have separated it from other psychological schools of thought. An instance of this tendency is L. S. Kubie's article "Über die Beziehung zwischen dem bedingten Reflex und der psychoanalytischen Technik" (*Imago*, Vol. 21, pp. 44-49), and also P. Schilder's "Psychoanalyse und bedingte Reflexe" (*ibid.*, pp. 50-66). These papers indicate the community of interest between psychoanalysis and Russian "reflexology." Among other psychoanalytical publications was a revised edition of Freud's *A General Introduction to Psychoanalysis* (New York: Liveright).

Psychoanalysis of children is a rapidly growing technique. A. Freud's *Psychoanalysis for Teachers and Parents* gives an account of the author's research in the application of psychoanalytic methods to children and their problems (New York: Emerson Books). In a work entitled *Roots of Crime*, F. Alexander and W. D. Healy (New York: Knopf) discuss eleven selected cases of juvenile delinquents who were psychoanalyzed, and consider the limitations and value of psychoanalysis in dealing with incipient criminality. A somewhat similar much-heralded study is *Wayward Youth* by A. Aichhorn (New York: Viking), whose identification of crime with neurosis has had wide influence in the western world. The book is a good illustration of the type of effect that psychological science is having in modern civilized life.

Special Fields. An undertaking of large proportions in animal psychology was initiated with the publication of the first of three volumes on *Comparative Psychology* by C. J. Warden, T. N. Jenkins, and L. H. Warner (New York: Ronald Press), dealing with "principles and methods." The other volumes will be devoted to plants, invertebrates, and vertebrates. As before, experiments in animal psychology comprised the largest class of papers read before the American Psychological Association.

Much psychological research is being carried on in the Soviet Union, and the ordinary difficulty of the language barrier is overcome in part by three summaries of such work, by R. A. McFarland ("Psychological Research in Soviet Russia," *Sci. Mo.*, Vol. 40, pp. 177-181); G. H. S. Razran ("Psychology in the U.S.S.R.," *J. of Phil.*, Vol. 32, pp. 19-24); R. S. Schultz and R. A. McFarland ("Industrial Psychology in the Soviet Union," *J. Appl. Psychol.*, Vol. 19, pp. 265-308).

Several new inventions and measuring devices in the auditory field are of direct or indirect interest to psychologists. In the Soviet Union much activity was devoted to experiments with "synthetic music" produced by drawing "artificial" sound tracks on moving picture films. N. Volnov of Moscow and E. Sholpo of Leningrad were prominent in this field. Theoretically its extension makes possible the production of any desired tone or tonal combination regardless of the existence of appropriate sound-generating instruments. E. W. Scripture described the use of the reverse procedure in an article on analyzing speech ("Film Tracks of English Vowels," *Journal of the Acoustical Society of America*, Vol. 6, pp. 169-172).

News and Notes. The new quarterly *Journal of Social Philosophy*, open to psychological articles having social significance, was commenced in October with Robert M. MacIver as editor, and published at the College of the City of New York. Alfred Adler is editor of the *International Journal*

of *Individual Psychology* (Chicago: International Publications), also a quarterly, which began in April. To relieve pressure upon American psychological periodicals, and to insure prompt publication, the *Journal of Psychology* was founded at Worcester, Mass., C. C. Murchison, editor. New foreign journals are the *Scandinavian Theoria*; *Tidskrift för Filosofi och Psykologi*, published in Sweden and edited by A. Petzell and others; *Die Schrift*, a journal of graphology published bimonthly (Brunn: R. M. Rohrer) and edited by O. Fanta and W. Schönfeld; *Zeitschrift für politische Psychologie und Sexualökonomie* (Copenhagen: Verlag für Sexualpolitik), edited by E. Parell; *Revista de medicina legal y jurisprudencia médica* (Rosaria, Argentina: Talleres Fenner), R. Bosch, editor. *Contributions to Psychological Theory*, edited by D. K. Adams and H. Lundholm, issued its opening number from Duke University Press.

Professor Joseph Peterson of the George Peabody College for Teachers, Nashville, Tenn., a former president of the American Psychological Association, died in September at the age of 57. Dr. Robert Saudek died in London on April 15 at the age of 54. In 1931 he founded *Character and Personality*, of which he was editor up to the time of his death.

Professor Wolfgang Kohler resigned from the faculty of the University of Berlin, where he became professor emeritus, receiving an appointment as visiting professor at Swarthmore College. Professor Karl S. Lashley, formerly of the University of Chicago, became Professor of Psychology at Harvard. Professor Mark A. May was made Director of the Institute of Human Relations at Yale, and Professor W. S. Hunter of Clark was elected to membership in the National Academy of Sciences. Professor Egon Brunswik of Vienna served as visiting lecturer at the University of California. C. E. Spearman became editor of *Character and Personality* following the death of Dr. Saudek.

A new handbook of psychology was published under the editorship of Charles E. Skinner, having the title *Readings in Psychology* (New York: Farrar & Rinehart). Its 26 chapters, written by nearly as many contributors, contains a varied selection of topics of fundamental importance in psychology. *The Evolution of Modern Psychology* by R. Muller-Freienfels and translated by W. Béran Wolfe contains a detailed account of the major problems in psychology as treated by the various schools of mental science since the advent of experimental psychology (Yale Univ. Press).

The spread of instructional and experimental moving picture films dealing with psychological topics deserves mention, a large number of such films being prepared and marketed in the past year. Among the sponsors and originators of these films are E. A. Doll, S. G. Longwell, A. Gesell, W. L. Valentine, A. Ford, H. Musgrave, M. Metfessel. The subjects include records of animal and infant behavior, stimuli for classroom presentation, and illustrations of experimental techniques. Descriptions of new films now appear regularly in *Psychological Abstracts*.

Among the new textbooks are *Psychology, A Factual Textbook* edited by E. G. Boring, H. S. Langfeld, H. P. Weld (New York: John Wiley & Sons). It is based wholly on experimental data and was produced with the aid of 19 collaborators. Another elementary text is *Psychology* by L. B. Hoisington (New York: Macmillan), coordinating numerous approaches and emphasizing every-

day mental activities. Another text is *General Psychology* by A. R. Gilliland, J. J. B. Morgan, and S. N. Stevens, which also stresses practical applications (New York: Heath). Work books have become popular; an example being the *Student's Guide for Beginning the Study of Psychology* by W. L. Valentine, J. H. Taylor, K. H. Baker, and F. N. Stanton (New York: Prentice-Hall). The fourth volume of the *Nouveau traité de psychologie*, edited by G. Dumas, made its appearance (Paris: Alcan). This volume deals with general organizational functions, and is written by H. Piéron, H. Delacroix, P. Janet, C. Blondel, E. Claparède, and other prominent French psychologists.

Organizations. The American Psychological Association held its forty-third annual meeting at the University of Michigan, Ann Arbor, September 4th to 7th. One hundred and twenty-nine papers were presented at 23 sessions, abstracts of all being printed in the *Psychological Bulletin* (Vol. 32, No. 9). The officers elected for 1935-36 are C. L. Hull (Yale), president; H. E. Jones (California) and M. A. May (Yale), directors. The total enrollment of members and associates is now close to fifteen hundred. The establishment of a new local section of the association for Washington, D. C., and Baltimore was authorized. Two current trends are illustrated by the appointment of two committees, one headed by G. B. Watson, to "study problems connected with the teaching of psychology in high schools and junior colleges," the other with A. T. Poffenberger as chairman, to "examine the question of the social utilization of psychologists, particularly those now unemployed." The activities of the numerous sectional branches of the A.P.A. which met during the year were reported in the *Psychological Bulletin* (Vol. 32, No. 8).

At the fifteenth International Physiological Congress, which met at Leningrad in August, 1500 were present, one of the principal addresses being made by Dr. I. P. Pavlov, now 86 years of age, the pioneer in work on the conditioned reflex. Of considerable interest to psychologists was a paper by W. B. Cannon of Harvard on the chemical products of the nervous impulse. This type of work is discussed by J. S. Gray ("An Objective Theory of Emotion," *Psychol. Rev.*, Vol. 42, pp 108-116).

At the sixth Scandinavian Congress of Psychiatry, held in Stockholm, August 22-24, the general theme was the "somatology of schizophrenia." The meeting of the American Psychiatric Association was held at Washington in May. As is customary, psychological papers were included in the programmes of the American Association for the Advancement of Science, which met at Minneapolis in June and at St. Louis in December. In England, the National Institute of Industrial Psychology considered "temperamental factors in industry." A symposium on "convergent trends in psychology" was held in November at the University of Southern California.

PSYCHOPATHOLOGY. See **PSYCHOLOGY.**
PUBLIC AFFAIRS. INSTITUTE OF. An organization inaugurated in 1927 at the University of Virginia for the purpose of advancing an enlightened public opinion on current political, social, and economic questions of a national character, but enlarged in 1932, after the closing of the Institute of Politics at Williamstown, to include international problems as well.

The attendance at the 1935 session, which was

held from June 30 through July 13, consisted of 2693 registered members and visitors, representing 33 states and 8 foreign countries. Membership in the Institute is open to men and women who have taken part in public life and to all those interested in the discussion of public affairs. There were 156 participants in the programme of round table discussion groups and large popular evening meetings. The largest attendance at an evening meeting in 1935 was 6000. Accounts of the proceedings of the 1935 session were carried in 702 newspapers in 513 cities throughout the United States, Canada, Hawaii, Philippine Islands, and Latin America.

The international part of the 1935 programme included round tables on the following subjects: "Reconstruction Problems in the Light of History"; "Latin-America—International, Economic, and Social Developments"; "European Relations—Rebuilding Peace"; "The Church in a Changing World"; "The Significance of American Membership in the International Labor Office"; "Contemporary Educational Issues"; "Conflict and Cooperation Across the Pacific"; and "American-German Relations." The national programme was composed of round tables on "Economic Security"; "Taxation for Prosperity"; "The Constitution and the New Deal"; and "The Place of Religion in Character Education."

The officers of administration in 1934 were: John Lloyd Newcomb, president of the University of Virginia; Charles Gilmore Maphis, director of the Institute; and Marjorie McLachlan, secretary of the Institute. Headquarters are at the University of Virginia, Charlottesville, Virginia.

PUBLIC FINANCE. There was no change during the year 1935 in the anxiety with which the public regarded the question of Treasury finance and the problems of the balanced budget. Previous years, with their huge deficits, had been the subject of some anxiety and of critical comment on the part of publicists, but at no time had there been any serious apprehension. The position taken had rather been that of asserting that, important as the Treasury situation might be, the purposes for which money was being spent were so much more significant that they ought to be given a leading position in public discussion. During the year 1935, the restiveness of the banks which had been asked to absorb the entire deficit of the community and the urgent representations of qualified economic authorities had led President Roosevelt to devote a considerable amount of attention to the study of the budget; while self-confessed administration spokesmen undertook in magazine articles to forecast the probable length of time in which it would be feasible to place public finance upon a balanced footing.

Concretely there was no immediate change in the simple fiscal policy of the government which consisted in floating enough assorted bonds, notes, bills, and other forms of Treasury obligations to provide the money necessary to cover the deficit. The sums asked for during the early portion of the year footed up to the tremendous total of nearly five billions of dollars; while during the early autumn further refunding and requests for new money practically skimmed off a large portion of the community's savings. These funds were spent as the President had previously foreshadowed, in paying the expenses of public works and "projects" of various kinds, designed to furnish employment to needy persons and hence, to prevent the recurrence of suffering. According to an announcement made by the President, at about the end of No-

vember, places had been found for about 3,500,000 men, and in paying their salaries the enormous appropriations of Congress were steadily used.

Authentic reports of enormous waste and fruitless spending upon impossible projects, as well as bad management of outlays were reported from widely scattered sources, and had the effect during the year of disgusting the public more than ever with this way of destroying the wealth of the nation. The administration, however, although mentally somewhat disturbed by the situation, continued to push further with its programme and as a result the close of the fiscal year 1935 (June 30, 1935) resulted in showing an aggregate deficit after all allowances of \$3,082,128,043. The first half of the new fiscal year resulted in a still larger proportionate invasion of the funds of the community, there being reported on the 31st of December, an excess of expenditures amounting to over two billion dollars. The total debt of the United States rose to a figure well above thirty billion dollars by the end of the year.

One factor of the situation which attracted particularly widespread attention was the continued maintenance of great staffs of Federal employees with relatively limited duties who were allowed to persist in office after the Supreme Court had declared their functions unconstitutional. This was conspicuously true of the NRA, which retained in its employ more than 2000 persons up to a comparatively advanced season of the year. Although the improvement of business and the slight reduction of the number of unemployed tended in some measures to distract the attention of the country from what was occurring, it still remained true that a very large number of the population continued well aware of the status of things and had grown more and more critical of financial method.

The year 1935 was further made noteworthy from the fiscal standpoint by the action of Congress in passing early in August a tax revision bill of drastic character. This measure raised the rates on large incomes above one million dollars a year and on large inheritances, to a practically confiscatory level. The action thus taken was not due to any studied plan for improving fiscal conditions, but was apparently the outgrowth of a political duel between the President and the Senator from Louisiana, the latter constantly asking what had been done or was going to be done to check the growth of large fortunes. As a result of the irritations thus engendered, President Roosevelt, early in July, requested that Congress should, within a few days thereafter, adopt his confiscatory income tax measure. The leaders of both houses refusing to act as thus directed, a summer extension of the Congressional session became necessary. According to official administration estimates the new taxes were calculated to produce an additional income of \$300,000,000, but these figures remain wholly unsubstantiated by any reliable data based upon past experience.

At one stage in the discussion, it was proposed by Senate leaders to make the new measure a real income raising bill by pushing the taxable level of income much lower down than had ever previously been attempted. This proposal was objected to by the President and in the final measure, the rates on small and medium incomes were left unchanged, while the level of exemption was not altered and the measure was characterized by its confiscatory features for large incomes and inheritances. At the same time, although nothing

had been said on the subject and no discussion of it took place, an extensive revision of administrative rulings and methods was put forward by the administration and adopted with little or no discussion by Congress. The measure however, was not to take effect until after the close of the calendar year, so that it produced no influence whatever upon actual Federal incomes during the first half of the fiscal year (up to Dec. 31, 1935). For the first half—July 1 to December 31—the improvement in yield which had begun to show itself in former months was still further emphasized. This improvement was in no small measure due to the fact that provisions previously enacted, to take effect at later dates, were now coming into full operation; while far greater stringency of administration and the application of dubious tax decisions on the part of the Treasury, resulted in the extortion of larger sums on the basis of the old duty rates than had ever before been collected.

It is worth noting at this point that during the summer of 1935, in addition to the tax measure already described, Congress further adopted the so-called Social Security Act, in which provision was made for the ultimate imposition of new taxes amounting to 9 per cent of all payrolls in specified occupations. Of this 9 per cent 3 per cent was to be

paid by the recipient of wages, while 6 per cent was to rest upon the employer. Liability for these duties was, however, spread over a series of years, increasing from year to year, and did not begin until Jan. 1, 1936. Still it remained true that the knowledge of this forthcoming enormous exaction, estimated by trustworthy persons to amount practically to a doubling of all existing taxation, had its effect upon the psychology of the public as to the tax question and tended to strengthen in their minds the thought that something must definitely be done to place the country upon a more scientific basis of levy before much further time had elapsed.

Federal Incomes. The total incomes for the fiscal year ending June 30, 1935, had been enlarged partly by the change in the gold dollar and partly by the changes in taxation for the preceding year. Stated without regard to the effect of such changes, ordinary incomes for the Federal Treasury were \$4,030,127,436 against \$3,277,733,940 for the previous year; while ordinary outlays were \$6,538,697,829 against \$6,883,861,532. The general tendency of incomes was to increase throughout the year due to the fact that business was improving and that actual earnings of corporations and to some extent of individuals were tending upward.

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1935, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1936 AND 1937

GENERAL AND SPECIAL ACCOUNTS		1935, actual	1936, estimates	1937, estimates
Receipts				
Internal revenue—				
Income tax		\$1,099,118,637.90	\$1,434,112,000.00	\$1,942,600,000.00
Miscellaneous internal revenue		1,657,191,518.70	1,873,091,000.00	2,103,114,000.00
Processing tax on farm products		521,379,871.22	529,042,000.00	547,300,000.00
Other internal revenue—				
Tax on carriers and their employees			33,000,000.00	101,600,000.00
Bituminous Coal Conservation Act			5,600,000.00	12,300,000.00
Social Security Act				433,200,000.00
Customs		343,353,033.56	353,191,000.00	354,000,000.00
Miscellaneous receipts—				
Proceeds of Government-owned securities—				
Principal—foreign obligations		66,709.53	69,898.00	72,094.00
Interest—foreign obligations		601,114.48	324,871.00	322,365.00
All other		38,105,611.49	79,476,253.00	62,688,694.00
Panama Canal tolls, etc.		24,704,262.38	24,890,500.00	24,905,500.00
Seigniorage		58,035,251.37	20,000,000.00	19,000,000.00
Other miscellaneous		57,911,191.33	57,996,424.00	53,114,997.00
Total		3,800,467,201.96	4,410,793,946.00	5,654,217,650.00
Expenditures				
<i>General</i>				
Departmental— ^a				
Legislative establishment		19,623,726.95	22,021,530.00	23,603,977.00
Executive proper		457,693.77	431,650.00	431,650.00
State Department		15,860,779.62	16,984,167.00	18,762,000.00
Treasury Department		121,863,248.67	129,580,000.00	142,886,100.00
War Department (nonmilitary)		2,128,302.12	1,588,700.00	1,333,000.00
Department of Justice		32,278,677.51	35,050,000.00	40,500,000.00
Post Office Department		14,258.16	25,000.00	25,000.00
Department of the Interior—				
Boulder Canyon project			13,000,000.00	16,600,000.00
Other		55,211,498.12	71,121,200.00	111,525,400.00
Department of Agriculture— ^a				
Public highways			30,000,000.00	64,000,000.00
Other		62,036,811.90	75,267,400.00	103,116,896.00
Department of Commerce		32,315,736.67	33,654,515.00	33,392,500.00
Department of Labor		13,012,157.65	15,000,500.00	24,185,000.00
Shipping Board		21,348,272.91	2,748,870.00	138,900.00
Independent offices and commissions		29,473,078.57	33,772,669.00	86,190,700.00
Unclassified items		490,365.40		
		362,408,815.08		
Adjustment for disbursing officers' checks outstanding ..		6,416,302.83		
Total, departmental ^a		355,992,512.25	474,748,461.00	666,413,323.00
Public buildings ^a		25,269,072.94	14,612,200.00	49,300,000.00
River and harbor work ^a		55,118,567.21	74,207,400.00	139,777,000.00
Panama Canal ^a		8,766,204.74	11,189,500.00	11,294,500.00
Postal deficiency		63,970,404.80	90,652,054.00	78,909,149.00
Retirement funds (United States share)—				
Civil service retirement fund		20,850,000.00	40,000,000.00	46,050,000.00
Foreign service retirement fund		159,100.00	162,400.00	185,300.00
Canal Zone retirement fund			500,000.00	500,000.00

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1935, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1936 AND 1937—(Continued)

	1935, actual	1936, estimates	1937, estimates
District of Columbia (United States share)	4,539,295.00	5,707,500.00	5,700,000.00
National defense—*			
Army	212,186,712.61	319,489,088.00	369,919,566.00
Navy	321,410,530.43	425,350,500.00	567,872,400.00
Veterans' pensions and benefits—			
Veterans' Administration *	555,573,274.31	617,822,280.00	630,058,900.00
Adjusted-service certificate fund	50,000,000.00	100,000,000.00	160,000,000.00
Agricultural Adjustment Administration *	561,540,268.39	508,014,000.00	507,052,000.00
Agricultural Adjustment Administration (act Aug. 24, 1935)		20,000,000.00	20,000,000.00
Farm Credit Administration *	12,979,061.00	10,755,382.00	4,926,500.00
Emergency Conservation Work		25,000,000.00	220,000,000.00
Tennessee Valley Authority		20,398,386.00	45,000,000.00
Debt charges—			
Retirements—			
Sinking fund	573,001,000.00	551,000,000.00	580,000,000.00
Redemption of bonds, etc., Public Works Administration		1,000,000.00	100,000.00
Estate taxes, forfeitures, gifts, etc.	557,250.00	25,000.00	25,000.00
Interest	820,926,353.45	742,000,000.00	805,000,000.00
Refunds—			
Customs	20,715,688.49	13,500,000.00	17,000,000.00
Internal revenue	24,531,990.82	33,603,000.00	32,403,100.00
Processing tax on farm products	31,208,208.32	23,000,000.00	42,000,000.00
Total, general	3,719,295,494.76	4,122,737,151.00	4,999,486,738.00
Recovery and relief:			
Agricultural aid—			
Agricultural Adjustment Administration	150,278,834.56	70,113,000.00	50,295,000.00
Commodity Credit Corporation—			
Reconstruction Finance Corporation funds	60,280,485.04	154,498,000.00	161,346,900.00
Other	136,420.18	7,000,000.00	4,000,000.00
Farm Credit Administration—			
Reconstruction Finance Corporation funds—			
Crop production loans	4,383,977.67	375,000.00	515,000.00
Regional agricultural credit corporations	8,603,628.15	28,313,000.00	14,528,600.00
Loans to joint-stock land banks	904,325.15	285,860.00	93,600.00
Farm mortgage relief	134.78		
Federal Farm Mortgage Corporation	265.62		
Federal intermediate credit banks revolving fund	15,000,000.00		
Farm Credit Administration	11,248,180.18		
Unclassified	110,000.00		
Other	111,827,178.61	33,050,000.00	9,655,000.00
Federal land banks—			
Capital stock	1,939,140.00		
Subscriptions to paid-in surplus	33,630,185.59	35,000,000.00	41,000,000.00
Reduction in interest rates on mortgages	12,477,674.95	30,000,000.00	23,000,000.00
Relief—			
Federal Emergency Relief Administration, including Federal Surplus Relief Corporation—			
Reconstruction Finance Corporation funds	499,033,591.17	486,400.00	
Other	1,315,308,715.70	423,865,300.00	
Civil Works Administration	11,327,263.67	469,100.00	
Emergency conservation work	435,508,643.05	503,383,000.00	
Department of Agriculture, relief	80,561,249.99	4,238,000.00	
Public works—			
Boulder Canyon project	23,820,507.04	15,755,300.00	9,100,000.00
Loans and grants to States, municipalities, etc.	137,707,417.46	52,450,000.00	325,756,000.00
Loans to railroads	66,230,752.95	40,000,000.00	
Public highways	317,356,940.05	276,543,000.00	236,518,000.00
River and harbor work	147,924,751.64	150,510,000.00	84,511,000.00
Rural Electrification Administration	16,820.93	5,000,000.00	2,500,000.00
Works Progress Administration		1,000,000,000.00	
Other public works—			
Administrative expenses, Public Works Administration	14,561,002.60	20,000,000.00	15,000,000.00
Legislative establishment	486,103.10	1,761,500.00	636,582.00
State Department	2,659,016.08	2,462,700.00	
Treasury Department—			
Public buildings	32,756,840.70	60,167,500.00	43,550,000.00
Other	5,615,951.73	26,194,700.00	5,755,000.00
War Department (nonmilitary)	1,488,375.48	640,300.00	
National defense—			
Army	61,298,999.11	21,938,400.00	4,850,000.00
Navy	115,037,329.60	138,290,600.00	41,225,000.00
Panama Canal	243,541.54	900.00	
Department of Justice	531,703.81	700,000.00	
Department of the Interior	53,136,034.00	77,426,900.00	57,820,100.00
Department of Agriculture	15,722,946.75	50,045,741.00	36,719,800.00
Department of Commerce	10,197,883.69	2,766,805.00	125,750.00
Department of Labor	6,260,630.26	9,795,600.00	134,000.00
Veterans' Administration	1,491,450.37	2,314,620.00	64,500.00
Independent offices and commissions	4,490,965.39	15,229,200.00	23,698,000.00
District of Columbia	957,701.03		
Unclassified items	418,175.19		
Aid to home owners—			
Home loan system—			
Reconstruction Finance Corporation funds—			
Home loan bank stock	200,000.00	43,095,300.00	
Home Owners' Loan Corporation	46,000,000.00		
Federal savings and loan associations	29,486,784.08	14,307,000.00	
Emergency housing	6,479,835.47	49,000,000.00	61,000,000.00

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1935, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1936 AND 1937—(Continued)

Federal Housing Administration—			
Reconstruction Finance Corporation funds	15,046,858.01	14,000,000.00	20,000,000.00
Other	917,015.01	82,985.00	.....
Resettlement Administration	1,761,663.06	73,200,000.00	150,000,000.00
Subsistence homesteads	3,661,937.71	900,000.00	.....
Miscellaneous—			
Export-Import Banks of Washington—			
Reconstruction Finance Corporation funds	2,618,129.74	16,914,000.00	10,000,000.00
Other	1,633.11	204,582.00	.....
Federal Deposit Insurance Corporation	497,850.35	.....	.....
Administration for Industrial Recovery	12,496,730.81	4,236,000.00	.....
Reconstruction Finance Corporation—direct loans and expenditures	135,384,933.68	215,000,000.00	125,000,000.00
Tennessee Valley Authority	36,148,537.34	29,601,614.00	.....
Total, recovery and relief	3,656,529,670.81	3,167,564,187.00	928,119,632.00
Total expenditures, general and special accounts ..	7,375,825,165.57	7,290,301,338.00	5,927,606,370.00
Supplemental items .....	.....	80,000,000.00	600,000,000.00
Unallocated balance of emergency appropriations as of Oct. 31, 1935, and additional amounts made available thereafter from Reconstruction Finance Corporation funds .....	.....	275,000,000.00	225,000,000.00
Grand total, expenditures, general and special accounts	7,375,825,165.57	7,645,301,338.00	6,752,606,370.00
Excess of expenditures over receipts	3,575,357,963.61	3,234,507,392.00	1,098,388,720.00
<i>Summary</i>			
	<i>1935, actual</i>	<i>1936, estimates</i>	<i>1937, estimates</i>
Excess of expenditures	3,575,357,963.61	3,234,507,392.00	1,098,388,720.00
Less public debt retirements	573,558,250.00	552,025,000.00	580,125,000.00
Excess of expenditures (excluding public debt retirements) ..	3,001,799,713.61	2,682,482,392.00	518,263,720.00
Trust accounts, increment on gold, etc., excess of receipts (—) or expenditures (+)	—522,056,152.87	+290,173,359.00	+46,950,769.00
.....	2,479,743,560.74	2,972,655,751.00	565,214,489.00
Less national bank note retirements	91,415,650.00	450,000,000.00	100,000,000.00
Total excess of expenditures (excluding public-debt retirements)	2,388,327,910.74	2,522,655,751.00	465,214,489.00
Decrease in general fund balance	740,576,700.69	290,173,359.00	46,950,769.00
Increase in the public debt	1,647,751,210.05	2,232,482,392.00	418,263,720.00
Public debt at beginning of year	27,053,141,414.48	28,700,892,625.00	30,933,375,017.00
Public debt at end of year	28,700,892,624.53	30,933,375,017.00	31,351,638,737.00
TRUST ACCOUNTS, INCREMENT ON GOLD, ETC.			
Receipts:			
Trust accounts	229,660,234.35	237,935,409.00	237,550,685.00
Deposits by States under Social Security Act (title IX, sec 904 (a)) .....	.....	48,500,000.00	282,800,000.00
Increment resulting from reduction in the weight of the gold dollar	1,738,019.63	.....	.....
Seigniorage ^a	140,111,441.47	169,888,559.00	60,000,000.00
Total	371,509,695.45	456,323,968.00	580,350,685.00
Expenditures:			
Trust accounts	165,959,662.87	233,377,430.00	224,501,454.00
Deposits by States under Social Security Act (title IX, sec 904 (a)) .....	.....	48,500,000.00	282,800,000.00
Transactions in checking accounts of governmental agencies (net) ^c	429,528,749.56	4,528,750.00	10,000,000.00
Chargeable against increment on gold—			
Melting losses, etc.	675,121.93	391,147.00	300,000.00
Payments to Federal Reserve banks (sec. 13 b, Federal Reserve Act, as amended)	20,931,857.34	9,700,000.00	9,700,000.00
For retirement of national bank notes	91,415,650.00	450,000,000.00	100,000,000.00
Total	150,546,457.42	746,497,327.00	627,301,454.00
Excess of receipts over expenditures	522,056,152.87	.....	.....
Excess of expenditures over receipts .....	.....	290,173,359.00	46,950,769.00

^a Additional expenditures on these accounts for the fiscal year 1935 are included under "Recovery and relief"

^b Detail on basis of checks issued.

^c The Executive order of June 10, 1933, as amended, provides for the transfer of the function of disbursement of all moneys of the United States (except those relating to the Military and Naval Establishments, rivers and harbors, and Panama Canal) to the Division of Disbursement, Treasury Department. The transfer of such functions in Washington, D. C., of the several departments and establishments subject to the Executive order of June 10, 1933, was completed on July 1, 1934. Therefore, effective July 1, 1934, in the interest of economy and efficiency, the disbursements by the Division of Disbursement, Treasury Department, which appear in daily Treasury statements under the caption "Departmental Expenditures" are on the basis of checks issued. The total shown, after making adjustment for outstanding checks of the Division of Disbursement, relating to such "Departmental Expenditures," is on the basis of checks paid as published heretofore.

^d This item represents seigniorage resulting from the issuance of silver certificates equal to the cost of the silver acquired under the Silver Purchase Act of 1934 and the amount returned for the silver received under the President's proclamation dated Aug. 9, 1934.

^e This item represents transfers of balances in checking accounts of certain special agencies of the Government, net transactions in which will hereafter be shown under this caption.

NOTE.—Excess credits and adjustments in italics to be deducted.

The movement was slow in getting under way but during the first half of the fiscal year 1936 (second half of the calendar year 1935) the enlargement was substantial. On Dec. 31, 1935, the indicated total ordinary deficit was \$1,879,651,192. Receipts for the year 1935 (including postal incomes) were \$4,660,922,938, and gross expenditures (including postal costs) were \$7,744,888,927.

Federal Expenditures. The outlays for the year were gradually increased on account of the action of Congress in placing in the hands of the President a fund of \$4,800,000,000 to be laid out upon "relief" or in any way that seemed likely most to advance the public welfare and to keep men employed. Enormous assignments of funds for so-called "works projects" were made in the belief that it would be possible to transfer persons who were "on relief" to those works projects and thus to "kill two birds with one stone"—help the consumer and at the same time bring about as large a circulation of money, upon the erroneous supposition that rapid and large spending would be beneficial to the community. Expenditures themselves, even without such incidental enlargement, had been very greatly swollen by reason of the fact that the bureaucracy had been so greatly extended and that governmental salaries had been so largely increased in various directions. Although from time to time it was stated that the Reconstruction Finance Corporation had come to the end of its funds available for aiding industry, the total of its commitments stood at December 1, 1935, at \$6,548,000,000. The table on pp. 615-617 showing total receipts and expenditures indicates the situation of the government as made public at the end of the calendar year.

ORDINARY RECEIPTS, EXPENDITURES CHARGEABLE AGAINST ORDINARY RECEIPTS, AND SURPLUS 1922 TO 1935

[On basis of daily Treasury statements (unrevised)]

Fiscal year	Total ordinary receipts	Expenditures chargeable against ordinary receipts	Surplus
1922	4,109,104,150	3,795,302,499	313,801,651
1923	4,007,135,480	3,697,478,020	309,657,460
1924	4,012,044,701	3,506,677,715	505,366,986
1925	3,780,148,684	3,529,643,446	250,505,238
1926	3,962,755,690	3,584,987,873	377,767,817
1927	4,129,394,441	3,493,584,519	635,809,922
1928	4,042,348,156	3,643,519,875	398,828,281
1929	4,033,250,225	3,848,463,190	184,787,035
1930	4,177,941,702	3,994,152,487	183,789,215
1931	3,317,233,493	4,219,950,338	902,716,845 ^{a, b}
1932	2,121,228,006	5,274,325,513	3,153,097,507 ^{a, b}
1933	2,238,356,180	5,306,623,054	3,068,266,874 ^{a, b}
1934	3,115,000,000	7,105,050,085	3,989,496,035 ^{a, b}
1935	4,030,127,436	7,112,556,079	3,082,128,643 ^b

^a Including an increase in emergency expenditure from \$1,277,000,000 to \$4,004,000,000. ^b Deficit.

Banking and Financing Policy of the Treasury. The habit of relying upon the banks to fill up deficits in the Treasury which had been acquired during the later years of the Hoover Administration and had grown fixed during the first two years of the Roosevelt period, now became almost unalterable. Secretary Morgenthau, who had taken office in the late autumn of 1933, had continued during 1934 to get what funds he needed by placing short and long term securities of every description in the hands of the banks. The financing of the year 1935 did not differ materially from that of 1934 although greater hesitation and doubt was exhibited by Federal administrators concerning the safety of the projects which they were carrying through. At various times during the year there was hesitation and on one

or two occasions a government bond panic apparently impended, being averted by the use of the funds of the Treasury in buying and operating in the bond market. In fact these operations were frankly admitted, the Treasury at one time (November, 1935) reporting that it had used as much as \$60,000,000 during the month for the purpose of buying securities and upholding the market.

Conditions grew more and more delicate on account of the tendency of bankers in many parts of the country to dispose of government obligations after they had acquired them, thereby keeping their net holdings down to what they considered a moderate figure. This policy obviously tended to limit the field for the placement of new issues of bonds. At the end of the calendar year the total holdings of government securities by all banks were at a high point. They had been estimated by the governor of the Federal Reserve Board at a Congressional hearing in May, 1935, as 60 per cent of the outstanding debt—probably about 18 billions of dollars, or more, of which the reporting member banks of the Federal Reserve system (on Dec. 31, 1935) held some 6 billions.

The Treasury continued the same policy as before, of offering securities at very low prices and at one period of the year undertook to sell them by auction, thereby tending to disorganize existing methods of distribution and to loosen the artificial support which the government bonds were receiving. The method was revoked after a couple of months, fairly late in the year. The average yield of government securities continued low, at one time reaching a point near 2.60, while at the end of 1935 it was probably in the neighborhood of 2.68 per cent. Nevertheless, the Treasury was able to carry through with substantial success its entire programme for the year which included the acquisition of some five billion dollars of new money through the extensive process of refunding old issues that had matured. The farce of pretending that offerings were greatly oversubscribed was largely abandoned—a step which added greatly to the sincerity and straight-forwardness with which Treasury affairs were conducted. So low, however, was the yield on securities that private investors very largely ceased to hold them and they became almost exclusively a banking and money market type of paper, although the banks were increasingly disposed to limit themselves to very short term maturities.

The Debt. In the table on pp. 619-620 the position of the debt as it existed at the close of the year 1935 is presented.

More than ever in the past, the increase of early refundable debts, the result of short term maturities, became worthy of comment and tended to cause in the financial community a feeling that conditions were in a very unstable situation. Toward the end of the year an address made by the President put forward the statement that he had been informed at the time of the bank holiday by "great bankers" that the country was capable of carrying indebtedness up to 70 billions of dollars. This precipitated a general discussion as to the amount of burden which the nation could probably support in the form of vested indebtedness, with the result that a good many persons became inclined to the view that the enlargement of debt that was going on was by no means so hazardous in comparison with the situation in other countries as had been supposed. The more cautious analysts were disposed to take note of the circumstances that the burden or weight of the debt was

PRELIMINARY STATEMENT OF THE PUBLIC DEBT, DEC. 31, 1935

[On the basis of daily Treasury statements]

Bonds:		
3% Panama Canal loan of 1961	\$ 49,800,000.00	
3% Conversion bonds of 1946-47	28,894,500.00	
2½% Postal Savings bonds (10th to 49th series)	121,820,840.00	\$ 200,515,340.00
Treasury Bonds—		
4½% bonds of 1947-52	758,955,800.00	
4% bonds of 1944-54	1,036,762,000.00	
3½% bonds of 1946-56	489,087,100.00	
3½% bonds of 1943-47	454,135,200.00	
3½% bonds of 1940-43	352,993,950.00	
3½% bonds of 1941-43	544,914,050.00	
3½% bonds of 1946-49	818,646,000.00	
3% bonds of 1951-55	755,476,000.00	
3½% bonds of 1941	834,474,100.00	
3½% bonds of 1943-45	1,400,570,500.00	
3½% bonds of 1944-46	1,518,858,800.00	
3% bonds of 1946-48	1,035,884,900.00	
3½% bonds of 1949-52	491,377,100.00	
2½% bonds of 1955-60	2,611,155,700.00	
2½% bonds of 1945-47	1,214,453,900.00	
United States Savings Bonds	14,317,745,100.00	153,477,487.50
Total bonds		14,671,737,927.50
Treasury Notes:		
3½% series A—1936, maturing Aug. 1, 1936	364,138,000.00	
2½% series B—1936, maturing Dec. 15, 1936	357,921,200.00	
2½% series C—1936, maturing Apr. 15, 1936	558,819,200.00	
1½% series D—1936, maturing Sept. 15, 1936	514,066,000.00	
1½% series E—1936, maturing June 15, 1936	686,616,400.00	
3½% series A—1937, maturing Sept. 15, 1937	817,483,500.00	
3% series B—1937, maturing Apr. 15, 1937	502,361,900.00	
3% series C—1937, maturing Feb. 15, 1937	428,730,700.00	
2½% series A—1938, maturing Feb. 1, 1938	276,679,600.00	
2½% series B—1938, maturing June 15, 1938	618,056,800.00	
3% series C—1938, maturing Mar. 15, 1938	455,175,500.00	
2½% series D—1938, maturing Sept. 15, 1938	596,416,100.00	
2½% series A—1939, maturing June 15, 1939	1,293,714,200.00	
1½% series B—1939, maturing Dec. 15, 1939	526,233,000.00	
1½% series C—1939, maturing Mar. 15, 1939	941,613,750.00	
1½% series A—1940, maturing Mar. 15, 1940	1,378,364,200.00	
1½% series B—1940, maturing June 15, 1940	738,428,400.00	
1½% series C—1940, maturing Dec. 15, 1940	737,150,600.00	
	11,791,969,050.00	
4% Civil Service retirement fund, series 1936 to 1940	275,900,000.00	
4% Foreign Service retirement fund, series 1936 to 1940	2,925,000.00	
4% Canal Zone retirement fund, series 1936 to 1940	2,805,000.00	
2% Postal Savings System series, maturing June 30, 1939 and 1940	100,000,000.00	
2% Federal Deposit Insurance Corporation series, maturing Dec. 1, 1939	100,000,000.00	12,273,599,050.00
Certificates of Indebtedness:		
4% Adjusted Service Certificate Fund series, maturing Jan. 1, 1936		246,800,000.00
Treasury Bills (Maturity Value):		
Series maturing Jan. 8, 1936	50,062,000.00	
Series maturing Jan. 15, 1936	50,020,000.00	
Series maturing Jan. 22, 1936	50,155,000.00	
Series maturing Jan. 29, 1936	50,085,000.00	
Series maturing Feb. 5, 1936	50,091,000.00	
Series maturing Feb. 11, 1936	50,255,000.00	
Series maturing Feb. 19, 1936	50,020,000.00	
Series maturing Feb. 26, 1936	50,037,000.00	
Series maturing Mar. 4, 1936	50,010,000.00	
Series maturing Mar. 11, 1936	50,080,000.00	
Series maturing Mar. 16, 1936	50,107,000.00	
Series maturing Mar. 16, 1936	50,006,000.00	
Series maturing Mar. 16, 1936	50,205,000.00	
Series maturing Mar. 16, 1936	50,830,000.00	
Series maturing Mar. 16, 1936	50,325,000.00	
Series maturing Mar. 16, 1936	50,143,000.00	
Series maturing Mar. 16, 1936	50,132,000.00	
Series maturing Mar. 16, 1936	50,015,000.00	
Series maturing Mar. 16, 1936	50,250,000.00	
Series maturing Mar. 18, 1936	50,059,000.00	
Series maturing Mar. 25, 1936	50,010,000.00	
Series maturing Apr. 1, 1936	50,000,000.00	
Series maturing Apr. 8, 1936	50,100,000.00	
Series maturing Apr. 15, 1936	50,062,000.00	
Series maturing Apr. 22, 1936	50,015,000.00	
Series maturing Apr. 29, 1936	50,050,000.00	
Series maturing May 6, 1936	50,102,000.00	
Series maturing May 13, 1936	50,072,000.00	
Series maturing May 20, 1936	50,045,000.00	
Series maturing May 27, 1936	50,000,000.00	
Series maturing June 3, 1936	50,046,000.00	
Series maturing June 10, 1936	50,031,000.00	
Series maturing June 17, 1936	50,015,000.00	
Series maturing June 24, 1936	50,040,000.00	
Series maturing July 1, 1936	50,003,000.00	
Series maturing July 8, 1936	50,025,000.00	
Series maturing July 15, 1936	50,111,000.00	
Series maturing July 22, 1936	50,030,000.00	

PRELIMINARY STATEMENT OF THE PUBLIC DEBT, DEC. 31, 1935—(Continued)

(On the basis of daily Treasury statements)

Series maturing July 29, 1936	50,046,000 00	
Series maturing Aug. 5, 1936	50,102,000 00	
Series maturing Aug. 12, 1936	50,017,000 00	
Series maturing Aug. 19, 1936	50,003,000 00	
Series maturing Aug. 26, 1936	50,050,000 00	
Series maturing Sept. 2, 1936	50,045,000 00	
Series maturing Sept. 9, 1936	50,000,000 00	
Series maturing Sept. 16, 1936	50,215,000 00	
Series maturing Sept. 23, 1936	50,070,000 00	
Series maturing Sept. 30, 1936	50,000,000 00	2,404,192,000.00
Total interest-bearing debt outstanding		29,596,328,977.50
Matured debt on which interest has ceased:		
Old debt matured—issued prior to Apr. 1, 1917	5,059,440.26	
3½%, 4%, and 4¼% First Liberty Loan bonds of 1932-47	59,753,650.00	
4% and 4¼% Second Liberty Loan bonds of 1927-42	1,648,100 00	
4¼% Third Liberty Loan bonds of 1928	2,656,400 00	
4¼% Fourth Liberty Loan bonds of 1933-38	92,640,200.00	
3¾% and 4¾% Victory notes of 1922-23	757,400 00	
Treasury notes, at various interest rates	17,096,450 00	
Certificates of indebtedness, at various interest rates	10,010,100 00	
Treasury bills	34,356,000 00	
Treasury savings certificates	316,775 00	224,294,515.26
Debt bearing no interest:		
United States notes	346,681,016 00	
Less gold reserve	156,039,430 93	
	190,641,585 07	
Deposits for retirement of national bank and Federal Reserve bank notes	540,742,451 50	
Old demand notes and fractional currency	2,034,903 82	
Thrift and Treasury saving stamps, unclassified sales, etc.	3,281,629 54	736,700,569.93
Total gross debt		30,557,324,062.69

COMPARATIVE PUBLIC DEBT STATEMENT

(On the basis of daily Treasury statements)

	Mar. 31, 1917, pre-war debt	Aug. 31, 1919, highest post-war debt	Dec. 31, 1930 lowest post-war debt	Dec. 31, 1934, a year ago	Nov. 30, 1935, last month	Dec. 31, 1935
Gross debt ...	\$1,282,044,346.28	\$26,596,701,648.01	\$16,026,087,087.07	\$28,478,663,924.70	\$29,634,021,333.94	\$30,557,324,062.69
Net balance in general fund	74,216,460.05	1,118,109,534.76	306,803,319.55	2,563,845,517.46	1,434,388,082.00	2,208,733,788.67
Gross debt less net balance in general fund	1,207,827,886.23	25,478,592,113.25	15,719,283,767.52	25,914,818,407.24	28,199,633,251.94	28,348,590,274.02

entirely a matter of the burden or extent of the taxation to be imposed and the opinion was quite general that with taxes as they stood (and without some concerted effort to push the line of exemption very much farther down) the debt of the United States could not safely be much enlarged.

Legislative Prospects. Legislative prospects at the end of 1935 were conflicting. Some official statements had been put out within the preceding 60 days and were broadly repeated in the Presidential annual message to the effect that no new taxation or legislation was to be expected in the new Congress. The fact remained that both the tax and the currency situations were chaotic and that non-partisan persons recognized the necessity of a thorough overhauling of both. Fears of a breakdown of the current monetary situation were frequent and intense. Although the revival of business, especially on the sales side, toward the latter part of the year, had been encouraging; there was no improvement in public finance of corresponding dimensions, and pessimism on the part of the informed section of the community with regard to the fiscal position of the government was correspondingly unrelieved.

PUBLIC UTILITY ACT. See ELECTRIC LIGHT AND POWER INDUSTRY.

PUBLIC UTILITY HOLDING COMPANY ACT. See UNITED STATES under Congress; LAW.

PUBLIC WORKS ADMINISTRATION (PWA). See MUNICIPAL OWNERSHIP; UNITED STATES.

PUERTO RICO, pwër'tō rē'kō. An American island possession in the West Indies. Capital, San Juan.

Area and Population. Puerto Rico has an area of 3435 square miles and a population estimated on July 1, 1934, at 1,648,601 (1,543,913 at the 1930 census). With 449.5 inhabitants to the square mile in 1934, the island was one of the world's most densely populated places. Births in 1934 numbered 65,595 (39.8 per 1000 of population) and deaths numbered 31,703 (19.2 per 1000). In 1930, 74.3 per cent of the population was classed as white and 25.7 per cent as Negro. There were about 2000 continental Americans and 5000 Spaniards on the island in 1930. The chief cities, with their 1930 populations, are: San Juan, 114,715; Ponce, 53,430; Mayaguez, 37,060; Caguas, 19,791. Spanish is the chief language but English is widely used. Roman Catholicism is the prevailing religion.

Education. Primary education is compulsory, but 41.4 per cent of those 10 years of age or over in 1930 were illiterate. In 1935 there were 2121 public schools, with a total enrollment of 246,414 pupils (239,495 in 1934), distributed as follows: Elementary rural schools, 123,910; elementary urban schools, 106,761; high schools, 8587; second unit rural schools, 7158. The number of teachers was 5077 and the educational budget for 1934-35 was \$3,740,089, or 26.87 per cent of all expenditures. Enrollment in the University of Puerto Rico in 1934-35 was 3724, including 407 in the

College of Agriculture and Mechanic Arts at Mayagüez and 30 in the School of Tropical Medicine.

Production. The 1930 census showed 52.4 per cent of the working population engaged in agriculture, fishing, and mining; 22.1 per cent in manufacturing; 11.4 per cent in trade and transportation; and 9.6 per cent in domestic and personal service. Production of the chief crops in 1934-35 was: Sugar, 773,021 short tons (1,103,822 in 1933-34); tobacco, about 22,500,000 lb. (25,000,000 in 1933-34); coffee, 7,000,000 lb. (9,000,000); grapefruit, 800 boxes; pineapples, 500,000 crates. The sugar quota allotted Puerto Rico under the Costigan-Jones Act was 802,842 short tons raw value for 1934 and 786,814 short tons for 1935. Cotton, cacao, coconuts, beans, plantains, and vegetables also are grown. Manganese and salt are the principal mineral products. The chief manufactures are refined sugar, cigars and cigarettes, garments, fine needlework, and canned and preserved fruit. Sugar grinding mills numbered 41 in 1934.

Overseas Trade. For the fiscal year 1934-35 imports into Puerto Rico were valued at \$69,985,938 (\$63,924,883 in 1933-34) and exports totaled \$79,677,688 (\$85,971,974 in 1933-34). The United States supplied imports valued at \$63,573,573 (\$57,503,315 in 1933-34) and purchased exports to the value of \$77,602,195 (\$83,214,473 in 1933-34). The chief exports to the United States in 1934-35 were: Raw sugar, \$40,470,061; wearing apparel, \$11,645,492; refined sugar, \$7,922,271; unmanufactured tobacco, \$7,146,428; molasses, \$2,098,703; linen handkerchiefs, \$1,036,727. Rice, wheat flour, cigarettes, cotton sheetings, oil products, etc., were leading imports.

Finance. Total general fund receipts of the Insular Government during the fiscal year 1934-35 were \$13,561,333, including revenue receipts of \$12,642,828, and expenditures totaled \$12,917,412, leaving a surplus of \$643,921. The final liquidation of general fund operations for the year showed an excess of resources over liabilities on June 30, 1935, of \$606,477, compared with a deficit of \$278,984 a year earlier. The bonded indebtedness of the government on June 30, 1935, was \$27,480,000, representing a reduction of \$395,000 since June 30, 1934.

Communications. Puerto Rico in 1935 had about 307 miles of railway lines, more than 1100 miles of hard-surfaced roads, and some 500 miles of graded dirt roads. San Juan is on the Pan American Airways circuit. San Juan and Mayaguez are the chief ports. During 1934-35 the entrance channel and harbor of San Juan were widened and deepened, enabling the larger tourist ships to enter without difficulty. During 1933-34 a total of 1628 overseas vessels of 2,713,833 gross tons entered and cleared Puerto Rican ports.

Government. The basic law of Puerto Rico is the Jones Act passed by the U. S. Congress Mar. 2, 1917, and subsequently amended. This Act conferred American citizenship collectively upon the inhabitants. Executive power is vested in a governor appointed by the President of the United States and legislative power in a legislature of two houses—the Senate of 19 members and the House of Representatives of 39 members, all elected for four years by universal male and female suffrage. A resident commissioner, elected for four years, represents the island in the United States Congress. The seven departmental heads form an executive council presided over by the Governor. Governor

in 1935, Maj. Gen. Blanton Winship. Resident Commissioner in the United States, Santiago Iglesias, elected Nov. 8, 1932.

HISTORY

Economic Recovery. In his Annual Report covering the fiscal year 1934-35, Governor Winship reported a marked economic improvement over the conditions of the previous year. He said that merchants and industrialists had had a profitable year, employment had increased slightly, bank deposits and savings rose while bank loans decreased, the construction trades had experienced a marked expansion, and the farmers had enjoyed a fairly good season. These improved conditions he attributed mainly to the large sums disbursed by the Puerto Rican Emergency Relief Administration and other Federal agencies. The improvement in the government's financial position was especially marked, tax revenues being the largest for any year since the establishment of the American civil government.

On the other hand, the Governor pointed out that unemployment was still very great and that the exodus of the rural population to urban centres continued and was "not expected to decrease until the Puerto Rico Reconstruction Administration has well under way the execution of its broad plans for the island's rehabilitation." He also emphasized the fact that although the activities of the various Federal emergency organizations had been "of tremendous assistance in maintaining the island socially and economically during these years of the depression," Puerto Rico had not received its due share of these funds. It was estimated late in 1935 that there had been allotted to Puerto Rico \$64,000,000, whereas on a par capita basis the island should have received \$157,000,000.

Rehabilitation Programme. The Puerto Rican Emergency Relief Administration, headed by James Bourne, had been spending \$1,000,000 monthly for a work relief programme supporting 75,000 persons, chiefly heads of families. After repeated delays a comprehensive plan for permanent economic and social rehabilitation of the overcrowded island was launched by President Roosevelt late in May, under authority conferred on him by the Emergency Relief Act of 1935. The Puerto Rico Reconstruction Administration was established, with Dr. Ernest Gruening as director. Its major objectives were the breaking up of the large agricultural holdings, owned largely by United States capitalists, and redistribution of the land among the thousands of families dependent upon Federal relief. In 1900 Congress had limited corporate holdings in the island to 500 acres but the law had been disregarded by sugar planters and others, with the result that in 1935 one-third of the cultivated area was in holdings of more than 500 acres.

A fund of \$42,000,000 was allotted to the PRRA for the first fiscal year. About three-fourths of this was to be spent on the land redistribution and rural rehabilitation programme and the remainder on related projects, as follows: Housing and slum clearance, \$2,200,000; reforestation, forestation, and prevention of soil erosion, \$994,144; new buildings and equipment for the University of Puerto Rico, \$1,197,068; rural electrification, \$2,727,600; cattle tick and coconut budrot eradication, \$306,740; rural rehabilitation and land utilization, \$5,917,840; rural resettlement, \$8,374,000; rehabilitation of coffee, tobacco and citrus fruit farms, \$7,909,600;

establishment of coöperative sugar centrals, coffee mills, cold-storage plants, etc., \$4,000,000.

Dr. Gruening was confronted from the beginning of his task with successive reductions in the original PRRA appropriation, with criticism and obstruction on the part of the coalition in control of the insular Legislature, and with legal obstacles to the progress of his programme. Pending the beginning of work on all the PRRA projects, the Relief Administration was obliged to continue its temporary activities. However by the end of November, 1935, more than 8700 persons had been transferred from temporary relief to PRRA projects and an additional 1500 non-relief workers had been engaged. The PRRA employment rolls were expected to increase at the rate of about 2500 weekly until the projects were fully manned. The cornerstone of a new library at the University of Puerto Rico was laid December 21, inaugurating a \$1,000,000 building project. On December 31 Dr. Gruening announced the purchase of the first land in connection with the rural rehabilitation programme—a 4400 acre tract owned by a subsidiary of the American Tobacco Co. Recognizing that this programme could only prove successful on a long-term basis, the PRRA asked Congressional authority to extend the expenditure of PRRA funds up to 1940, instead of to June, 1937, as required on other Federal Emergency Relief Administration projects. Congress failed to act on the measure in 1935 and it was to be reintroduced in 1936.

Statehood vs. Independence. The pressing nature of Puerto Rico's economic and social problems and the extent of Federal assistance brought to a head in 1935 the long-debated issue of Statehood versus independence. None of the island's political parties were satisfied with its existing political relationship to the United States. But while the government parties, representing a coalition of the Union Republicans and Socialists, favored Statehood as a means of obtaining unrestricted autonomy, the Liberals and Nationalists espoused full independence. The Liberals adopted a policy of cooperation pending achievement of independence, but the numerically small Nationalist party assumed an intransigent attitude and refused to participate in elections or to permit its members to hold office in the insular government.

A bill authorizing the Puerto Rican Legislature to draft a Constitution and become the 49th State in the American Union was introduced in Congress early in 1935 and hearings on the bill were opened before the Committee on Territories in June. The hearings were to be resumed when Congress reassembled in 1936. Meanwhile the Nationalist agitation had assumed considerable momentum, especially after a clash between the police and armed Nationalists in the university town of Rio Piedras on October 24, in which four Nationalists were killed. At the funeral services, attended by 8000 persons, the Nationalist leader, Pedro Albizu Campos, asked all present to raise their right hands and swear to avenge the "murdered national heroes, fallen for their country's honor."

Legislation. The third regular session of the Thirteenth Legislature convened on Feb. 11, 1935, and adjourned *sine die* on April 14, after passing 103 bills and 99 joint resolutions, of which the Governor approved 47 bills and 37 joint resolutions. The measures passed included the restriction of appeals from decisions of the Public Service Commission, extension of the suffrage to illiterates of both sexes, and the extension of the public

electric power lines to San Juan, Ponce, and Adjuntas for use for public purposes only.

The Coalition Government had been at loggerheads with Relief Administrator Bourne on the ground that he had not consulted it in connection with the administration of his office. Accordingly the Legislature adjourned several days earlier than usual, without acting on a number of important bills, in protest against the alleged dictatorial attitude of the Washington Government. Governor Winship recalled the Legislature in special session from June 25 to July 8, during which 49 additional bills and 16 joint resolutions were passed and received the Governor's signature. The budget bill called for expenditures in 1935-36 of slightly more than \$11,000,000, an increase resulting from the partial restoration of the salary reductions imposed on teachers and police, the employment of 200 continental American teachers of English, and the extension of health and agricultural services. To offset these larger expenditures, inheritance taxes were increased and higher income taxes were imposed, but the latter bill was vetoed by the Governor because of certain defects.

A number of acts were passed permitting Puerto Rico to take full advantage of Federal appropriations; giving effect to the United States law of 1900 restricting land holdings to 500 acres; regulating the branding and sale of coffee, regulating gambling in connection with horse racing and clandestine lotteries; limiting the hours of employment to eight per day. A new Workmen's Compensation Act went into effect July 1, 1935.

Consult Harwood Hull, "Better Times for Puerto Rico," *Current History*, January, 1936.

PULITZER PRIZES. A series of awards established in 1915 by the will of Joseph Pulitzer, publisher of the *New York World*, to be presented annually by Columbia University, on recommendation of the advisory board of the Pulitzer School of Journalism, for outstanding achievements in letters and journalism. The value of the prizes in the group devoted to letters is \$1000, with the exception of that for the best work on the history of the United States which is \$2000. The value of the prizes in the journalistic group is \$500, with the exception of that for the best example of a reporter's work during the year, which is \$1000.

The awards for the year 1934 were announced on May 6, 1935. In literature, prizes were as follows: for the best novel by an American author, *Now in November*, by Josephine Winslow Johnson, was adjudged the outstanding work; for the best drama, *The Old Maid*, by Zoe Akins, based on a story of old New York by Edith Wharton, was the selection of the committee; for the best volume of verse, *Bright Ambush*, by Audrey Wurdemann (Mrs. Joseph Auslander); for the best book dealing with the history of the United States, *The Colonial Period in American History*, by Prof. Charles McLean Andrews of Yale University; for the best American biography, *R. E. Lee*, a four-volume study of the Confederate States leader, by Douglas Southall Freeman.

In journalism, the gold medal for "the most disinterested and meritorious public service rendered by an American newspaper" was awarded to the *Sacramento (Calif.) Bee* for publishing a series of articles by Arthur B. Waugh that led to the withdrawal of the nominations of two men for Federal judgeships. For distinguished service as a foreign or Washington correspondent, the award for 1934 was presented to Arthur Krock, Washington correspondent of the *New York Times*, for his articles

reflecting scenes in the capital under the New Deal. For a distinguished example of a reporter's work, the award was given to William H. Taylor, a sports writer on the New York *Herald Tribune*, for his stories on the America's Cup races. The prize for the best example of a cartoonist's work went to Ross A. Lewis of the *Milwaukee Journal* for the cartoon published Sept. 1, 1934, over the caption, "Sure, I'll Work for Both Sides." No editorial published during the year was adjudged sufficiently meritorious to receive an award.

PUPIN, pû-pên', MICHAEL IDVORSKY. An American physicist and inventor, died in New York City, Mar. 12, 1935. Born at Idvor in the Banat of Hungary, of Serbian ancestry, Oct. 4, 1858, he attended school in his native country and at the age of 16 came to the United States to seek his fortune. Working day by day, and attending Cooper Union in New York at night, he saved enough with which to enter Columbia College in 1879. He received the A.B. degree in 1883. Under the first John Tyndall Fellowship, he studied abroad at Cambridge, England, and at Berlin under Van Helmholtz. From the latter university he received the degree of Ph.D., for his mathematical dissertation, *Osmotic Pressure and Free Energy*. He returned to America to become assistant teacher of electrical engineering at Columbia, and became successively instructor of mathematical physics (1890-92); adjunct professor of mechanics (1892-1901); professor of electromechanics (1901-31), and professor emeritus (1931). From 1911 he served as director of the Phoenix Research Laboratories.

One of the foremost physicists in the world, Dr. Pupin's researches were connected principally in electrical resonance, in theoretical and experimental consideration of the magnetization of iron, and electrical-wave propagation. He had many inventions to his credit, the most important being a system of multiplex telegraphy accomplished by electrical tuning (1894), later acquired by the Marconi interests; the Pupin coil, a telegraph or telephone cable through which transmission was made more effective by the use of inductances located at regular intervals. (For a detailed account of this invention, see the article *Telephone* in *THE NEW INTERNATIONAL ENCYCLOPEDIA*). In 1901 he sold the patent to the Bell Telephone Company and the German telephone interests for one of the largest sums ever given to an inventor, said to be about a million dollars. During the World War (1914-17) he worked on and completed an invention to overcome static resistance to wireless telegraphy. At the time of his death he was working, with the aid of an assistant, on electric circuits, particularly in conjunction with submarine transmission. His scientific discovery of secondary X-ray radiation, and the production of a photographic method whereby the time of exposure was shortened from about an hour to a few minutes (1896) were no less important.

An ardent patriot, he was nevertheless deeply interested in the affairs of Serbia, and in 1912 was appointed Honorary Consul General in New York City by that Government, from which he resigned in 1920. During the World War he was an active exponent of the Serbian cause, and in 1915 organized a group of Columbia students who went to Serbia to do relief work. He served also as a member of the National Research Council and the National Advisory Committee for Aeronautics, and in 1919 attended the Paris Peace Conference

as a scientific adviser. In 1930 the Yugoslav Government conferred on him its highest decoration—the Order of the White Eagle.

For his scientific achievements, Dr. Pupin received many honors, foremost among which were the Herbert Prize of the French Academy (1916); the Edison Prize for his work in mathematical physics (1921); Gold Medal of Honor, Institute of Radio Engineers (1924); the Washington Medal for engineering of the Western Society of Engineers (1928) and the John Fritz Gold Medal of the American Institution of Electrical Engineers in conjunction with other engineering societies. A fellow of the American Association for the Advancement of Science, he was its president, 1925-26, and held membership in the National Academy of Sciences, and the American Institute of Electrical Engineers, president 1925-26.

Pupin's writings include: "Electrical Oscillations of Low Frequency and Their Resonance," in the *American Journal of Science* (1893); *Resonance Analysis of Alternating Currents* (1894); *Electro-Magnetic Theory* (1895); "Propagation of Long Electrical Waves," *Transactions, American Institute of Electrical Engineers* (1899); "Wave Propagation over Non-Uniform Conductors," *Transactions, American Mathematical Society* (1900); *Immigrant to Inventor*, his biography, for which he received the Pulitzer Prize Award in 1924 (1923); *The New Reformation* (1927); *Romance of the Machine* (1930).

PURDUE UNIVERSITY. A State technological institution in Lafayette, Ind., founded in 1869. The enrollment for the autumn of 1935 was 4615; registration in the 1935 summer session was 793. There were 371 members on the faculty. The endowment amounted to \$340,000, and the income for the year was \$3,617,560. The library contained 120,000 volumes. A common programme of studies was established for all freshmen entering the engineering schools, and a combined engineering-law curriculum and a public service curriculum were introduced. President, Edward C. Elliott, Ph.D.

PYROMETALLURGY. See METALLURGY.

QATAR. See under ARABIA.

QUEBEC, kwê-bek'. A Province of Canada. Area, 594,534 sq. miles; population (1935 estimate), 3,062,000 compared with 2,874,255 (1931 census). During 1934, there were 76,432 living births, 31,923 deaths, and 18,242 marriages. Chief cities (with 1931 populations): Montreal (818,577), Quebec, the capital (130,594), Verdun (60,745), Three Rivers (35,450), Hull (29,433), Sherbrooke (28,933), Outremont (28,641). In 1933, there were 677,250 pupils in the 8576 schools (including high, superior, and normal schools). The four universities (McGill, Bishop's, Laval, and Montreal) had 22,863 students enrolled during 1933-34.

Production. The preliminary estimated value of field crops for 1935 was \$85,711,000 (\$98,309,000 in 1934) of which hay and clover (5,116,000 tons) accounted for \$44,151,000; oats (45,570,000 bu.), \$19,595,000; potatoes (562,760 tons), \$8,674,000; turnips, etc., \$3,131,000; fodder corn, \$2,237,000; barley, \$2,062,000; buckwheat, \$1,983,000; mixed grains, \$1,815,000; wheat, \$1,130,000. Live-stock in 1934: 1,725,600 cattle, 612,000 sheep, 551,400 swine, 264,500 horses. Fur production (1933-34): 307,819 pelts valued at \$1,479,811 of which silver fox (22,690 pelts) represented \$762,212. The fisheries catch (1934) was valued at \$2,306,517.

Mineral production (1934) was valued at \$31,-

269,945 of which gold (390,097 fine oz.) accounted for \$13,458,347; copper (73,968,545 lb.), \$5,487,948; silver (470,254 fine oz.), \$223,187; asbestos (155,980 tons), \$4,936,326; magnesitic dolomite, \$382,927. Mineral production (1935): gold, 474,746 fine oz., valued at \$16,706,312; copper, 77,555,112 lb. During 1933, from the 8384 factories, with 163,571 workers, the net value of products was \$360,115,939.

Government. For the year ended June 30, 1935, ordinary revenue amounted to \$31,984,885; ordinary expenditure, \$36,924,121; net funded debt, \$118,935,750. Budget estimates (1935-36): ordinary revenue, \$33,580,478; ordinary expenditure, \$35,877,393. The Province was administered by a lieutenant-governor aided by a responsible ministry, a legislative council of 24 members appointed for life, and a legislative assembly of 90 members (47 Liberals as against 42 for the opposition—made up of Conservatives, Action Nationale Libérale, and National Unionists—were elected at the Provincial general election of Nov. 25, 1935; one seat was in dispute). Quebec was represented in the Dominion Parliament by 24 Senators (appointed for life) and 65 members in the House of Commons (56 Liberals, 5 Conservatives, and 4 Independent Liberals were elected at the Dominion general election of Oct. 14, 1935). Lieutenant-Governor, E. L. Patenaude; Premier, L. A. Taschereau (Liberal). See CANADA under *History*.

QUEENS-CHICORA COLLEGE. A college for women in Charlotte, N. C., founded in 1857; nonsectarian in purpose but under the direction of the Presbyterian Church. The enrollment for the autumn term of 1935 was 354. There were 30 members on the faculty. The endowment amounted to \$336,000, and the income for the year was \$15,000. The library contained approximately 14,000 volumes. President, William H. Frazer, D.D.

QUEENSLAND. A State of Australia. Area, 670,500 sq. miles, population (Mar. 31, 1935), 962,213 exclusive of 16,957 (1933 census) aborigines (12,532 full-blood and 4425 half-caste). During 1934 there were 17,300 births, 8192 deaths, and 7635 marriages. Chief towns (with 1933 census populations): Brisbane, 299,782; Rockhampton, 29,373; Toowoomba, 26,430; Townsville, 25,872; Ipswich, 22,499. In 1933 there were 1933 schools of all kinds with a total enrollment of 190,884.

Production. Sugar cane, wheat, bananas, pineapples, maize, tobacco, grapes, cotton, hay, and oranges were the important agricultural products. Livestock in the State (1934): 21,134,633 sheep, 5,982,074 cattle, 439,606 horses, and 217,448 (1933) pigs. Production (1933-34): Wool, 169,989,516 lb.; butter, 127,343,160 lb.; cheese, 13,887,233 lb.; bacon and ham, 18,881,267 lb. Mineral production (1934) was valued at \$2,773,373 including gold (115,471 oz. fine), £982,636; silver and lead, £671,255; copper, £95,903; tin, £179,404; coal (956,558 tons), £752,303. During 1933-34 the value of production from the 2345 factories, with 40,083 employees, was £13,712,508.

Government. For the year ended June 30, 1935, revenue amounted to £15,280,000; expenditure, £15,845,000; gross public debt (June 30, 1934), £117,817,352 (£ Australian averaged \$4,0095 for 1934). Budget estimates (1935-36): Revenue, £15,036,810; expenditure, £16,199,183. Executive power was vested in a governor, and legislative power in a parliament consisting of a legislative assembly of 62 members elected for three years. Legislative Assembly (elected May 11, 1935): 45 Labor, 14 Coun-

try, and 3 Nationalist. Governor in 1935, Lieut.-Col. Sir L. O. Wilson; Premier, W. F. Smith. See AUSTRALIA.

RACING. Alfred Gwynne Vanderbilt, America's youngest sportsman who breeds and races thoroughbreds, dominated the American turf in 1935, the most successful season from almost every standpoint in 10 years. Vanderbilt's stable accounted for an unusual amount of important stakes and also for the handsome total of \$302,955 in prize money. That sum, more than a third of it accounted for by the master handicap horse, Discovery, was one of the bright spots of the campaign. Omaha, William Woodward's three-year-old, was the other bright spot. He won six races, was second once and third twice, and was the leading money winner of the year with \$142,255.

Omaha won a conditioning race, was third to Cornelius Vanderbilt Whitney's Today and Mrs. Payne Whitney's Play Eye in his second start—in the Wood Memorial, in which he was bumped at the start. He then won the Kentucky Derby, the Preakness, the Belmont, the Dwyer, and the Arlington Classic before he went lame late in the season. He was beaten by Rosemont in the Withers—a mile race—a distance a bit short for a slow beginner. He went out of his class in the Brooklyn Handicap and was content with third to Discovery and King Saxon in which Discovery hung up a new world's record of 1:48½ for a mile and a furlong. Firethorn was probably the second best three-year-old—being runner-up to Omaha in both the Preakness and Belmont, winning the Lawrence Realization and the Jockey Club Gold Cup and the Washington Handicap. He wasn't eligible for the Kentucky Derby.

Though Alfred Vanderbilt's Discovery finished behind Omaha and Fred Alger's Azucar (winner of the \$100,000 Santa Anita Handicap) in the matter of money winning, he was easily the outstanding horse of the season. Once this son of Display found himself in the Brooklyn Handicap, he was invincible, impervious to everything but overpowering weight. Discovery was beaten in each of his first three starts—the Toboggan, Metropolitan and Suburban Handicaps. Then he won eight successive stake races, traveling all over the country to do it. He beat Azucar in the Detroit Challenge Cup, won the Stars and Stripes at Arlington Park, The Butler at Empire City, The Bunker Hill at Suffolk Downs, The Arlington Handicap, the Wilson, the Merchants', and the Citizens' Handicaps. In the Narragansett Special Discovery, under 139 lb. was beaten by Top Row, carrying a burden twenty-nine pounds less. He also bowed to Top Row in the Massachusetts Handicap. He finished the season by winning the Whitney, the Hawthorne Gold Cup and the Coney Island Special.

William Woodward, Omaha's owner, was second to Vanderbilt in money winning, taking down \$195,860. C. V. Whitney was third with \$147,830, and E. R. Bradley fourth with \$142,455. C. Stevenson was high jockey with 205 winners in 961 mounts, topping Wayne Wright by 14 winners. Wright also rode 961 horses. R. Workman had the best percentage among the jockeys, riding 514 mounts, finishing first 121 times, second 73, and third 60. Hirsch Jacobs, for the third successive year, topped American trainers when he saddled 109 winners.

C. H. Knebelkamp's King Saxon was the season's best sprinter, and that after a rugged winter of racing in Florida. The two-year-old situation

was muddled with no youngster standing out at the end of the season. Slight weight shifts would enable the best to avenge previous defeats the next time out. C. V. Whitney's Red Rain, winner of the Hopeful, Marshall Field's Tintagel, Futurity victor, Coldstream Stud's Coldstream which ran a dead-heat with Red Rain in the Saratoga Special, and Hal Price Headley's Hollywood, winner of the Pimlico Futurity, were rated on a par. Bomar Stable's Grand Slam, winner of the Arlington Futurity, Vanderbilt's Postage Due, United States Hotel Stakes winner, and Ogden Phipps White Cockade were all well considered.

The Aga Khan's Bahram won the English Derby by two lengths from Sir Abe Bailey's Robin Goodfellow, an outsider. It was Bahram's seventh straight victory and the second Derby for the Aga Khan, whose Blenheim won in 1930. Major Noel Furlong's Reynoldstown, an outsider at 22 to 1, ridden by the owner's son, Frank, won the Grand National Steeplechase at Aintree, Liverpool, by three lengths from Lady Lindsay's Blue Prince.

Harness Racing. While none approached Peter Manning's long standing world record of 1:56 $\frac{1}{4}$, the speed of the light harness horses in 1935 set new marks for the Grand Circuit meetings and for the half mile tracks as well. It's difficult to name the achievement which excelled, but the feat that made veteran horsemen gasp was the mile in 2:00 by the four-year-old filly, Calumet Evelyn, the first time she trotted in public. And she had won a pacing race in 1:59 $\frac{1}{4}$, fastest time of the season, four days earlier. The two performances at Lexington made her the fastest double gaited harness horse yet to appear.

Tara, another four-year-old filly, showed remarkable speed and stamina in the free-for-all at Goshen in August, going three heats in 2:00, 2:01, and 2:02. Greyhound, 2:00, unbeaten three-year-old of the season ranks with Calumet Evelyn, and Tara. His fastest heat was in at Springfield, Ill, but his greatest performance was his victory in the \$33,000 Hambletonian at Goshen. He won consecutive heats in 2:02 $\frac{1}{4}$ and 2:02 $\frac{1}{4}$. Rosalind, 2:03, winner of the Kentucky Futurity, was the outstanding juvenile trotter of the campaign. Besides Calumet Evelyn, the ranking pacers of the season were Laurel Hanover, 1:59 $\frac{1}{4}$, Cardinal Prince, 1:59 $\frac{1}{2}$; J. E. Vonian, 1:59 $\frac{1}{4}$; Theo Guy, 2:00, and Dominion Grattan, 2:00.

Steeplechasing. Reynoldstown, winner of the Grand National probably rates in this category, but his race ranks with the thoroughbred races of the world. In the United States, all jumping honors of note were split among four sons of Stefan the Great. John Schiff's Indigo was the leading timber topper and J.W.Y. Martin's Luckite was the best brush horse of the season. Mrs. T. W. Durant's St. Francis, another son of Stefan, won the hurdle championship and was a fine brush horse. And the fourth son, J. E. Widener's Bush-ranger, was best brush horse on the race tracks, and later tried flat racing and won the Whitney Gold Vase at the United Hunts meeting. Mrs. Marion DuPont Somerville's stable sent out 32 winners. Carroll K. Bassett was the leading rider with 22 victories.

RACKETEERING. See CRIME; NEW YORK.
RADCLIFFE COLLEGE. A nonsectarian college for women in Cambridge, Mass., founded in 1879. The enrollment for the autumn of 1935 was 1000. Instruction was given by 380 teachers from

Harvard University. The productive funds amounted to \$5,020,467 and the income, including tuition, for college purposes, was \$507,635. The library contained 80,000 volumes, exclusive of pamphlets. President, Ada Louise Comstock, Litt.D.

RADIO. The two outstanding new developments in the radio art in 1935 were the introduction of the "all-metal" radio tubes by the General Electric Company, and the demonstration of broadcasting and reception by "frequency modulation" by E. H. Armstrong inventor of the "feed-back" and "superheterodyne" circuits.

The all-metal tubes (made of steel) are smaller than glass tubes, and the metal case acts as a shield from other electrostatic and magnetic fields. The essential feature which makes this construction possible is the new "seal" by which the various connecting conductors are carried into the inside of the case and insulated from the case by beads of glass which make an air tight seal. This was made possible by the development of a special metal, and special glass which have the same coefficient of expansion with heat, thus keeping the seal tight in spite of the heating and cooling of the tubes during operation. Because the tubes are metal and black they will dissipate heat more rapidly than glass tubes and thus will remain cooler or can be made smaller for the same necessary rate of heat dissipation.

Armstrong's invention was an attempt to eliminate the disturbances caused by "static" of all kinds. The usual broadcast systems impressed the voice modulations on the carrier wave by varying the strength or intensity of that wave, which is also what static does to the wave, suddenly altering its strength. Armstrong decided to vary the frequency of the carrier, that is, change the number of waves per second sent out by the transmitter. This is a characteristic of the carrier which is not acted upon by static. The principle had been proposed and discussed before but there was no way known of reducing it to practice. Armstrong accomplished this by means of phase modulation and correction. His invention's principal disadvantage is that it requires a wider wave band or channel than the more usual method. The demonstration was carried on at ultra-high frequencies, in some cases at 150 megacycles or 2 meter wave length. At these high frequencies the width of the channel or band is not as important as at the lower frequencies of broadcasting.

In the commercial broadcasting field an improvement in fidelity of reproduction was accomplished both by changes in the transmitter and improvements in the home receivers. Frequencies from 130 kc. to 60,000 kc. are now in use and some receiving sets will respond to this range although the majority of "all-wave" receivers are adapted to from 500 to 18,000 kc. in four bands. Some of the transmitting antennae have been designed using the tower itself as the main radiator. In some cases an inductance and capacity are connected in series with the tower at the top and this is said to give better radiation. Many new ultra-high frequency broadcasting stations have been installed all over the world and it has become a fad to "fish" for distant stations. One enthusiastic fan reported that he had received and recorded 887 stations aggregating some 916,000 miles of distance. Australia and Java are near neighbors to these fans.

There were 1126 new models of radio receiving sets on the market in 1935, brought out by 110

different manufacturers. Of these 21 per cent of the models and 47 per cent of the manufacturers used the new metal tubes. There were 5,500,000 sets sold, an increase of 17 per cent over 1934. There was an average of 6 tubes per set and the average price was \$73. A considerable improvement was made in the design of the doublet antenna for all-wave reception and various manufacturers sold complete equipments for this purpose.

One million auto radios were sold during the year. The use of the all-steel body for automobiles required ingenuity in the construction of the antenna which is frequently placed under the running board. Radio cars are used by the police in 398 cities. Most of these cars are for one-way communication and have a working range of from 10 to 14 miles. Two thousand vessels now have radio and almost one thousand planes. Of the latter about a third are for two-way communication.

There is an installation of wired radio in Cleveland in which about 400 homes receive radio programmes over the power wires. Radio played a very important part in the stratosphere flight of the balloon *Explorer II* on Nov. 11, 1935, in the Dakotas. Communication by short waves was maintained throughout the whole flight. A portable transmitting and receiving set called a "Transceiver," which may be carried on a man's back, was brought out and used by foresters in the protection of forests from fires. It had a range of from one to ten miles. See INTERNATIONAL LAW; PHYSICS.

National Committee on Education by Radio. Education by radio first received national recognition when on June 6, 1929, Secretary of the Interior Wilbur appointed a committee to study the problems of radio in education. See NEW INTERNATIONAL YEAR BOOK for 1934, p. 609.

The Committee's activities include publishing the periodical—*Education by Radio*; and a service bureau to assist educational stations in securing licenses and in other technical procedures. The Committee called a national conference on "The Use of Radio as a Cultural Agency in a Democracy." This conference, held on May 7 and 8, 1934, adopted a set of fundamental principles which are basic to the setting up of a sound system of broadcasting. The Committee has encouraged research in education by radio and has promoted and coordinated experiments in the use of radio, both in school and adult education. It has sent representatives to state, national, and international conferences and has furnished speakers for important national civic groups.

The chairman of the Committee is Arthur G. Crane, president, University of Wyoming. The vice-chairman is H. J. Umberger, director, division of extension, Kansas State College of Agriculture and Mechanic Arts. The secretary and research director, who administers the Committee's activities, is Tracy F. Tyler. The offices of the Committee are located at 1201 Sixteenth Street, Northwest, Washington, D. C.

RADIOACTIVITY. See CHEMISTRY; PHYSICS.

RAILWAY ACCIDENTS. The number of persons killed in connection with the movement of trains, locomotives, or cars in the United States was reduced from 4816 in 1933 to 4652 in 1934, according to the annual report for the latter year as issued by the Interstate Commerce Commission in January, 1936. Of the persons killed, 435

were employees and 27 were passengers, as compared with 420 employees and 38 passengers in 1933. Trespassers accounted for more than half of the total fatalities. Non-trespassers, chiefly in automobile accidents at grade-crossings, accounted for 1612 deaths in 1934. In the first seven months of 1935, according to a news item issued by the Commission in November, 853 persons had been killed at grade-crossings.

Some of the major accidents throughout the world in the year 1935 were:

January 6. At the Torbine station, 130 miles south of Leningrad, Russia, the Leningrad-Moscow express crashed into the Leningrad-Tiflis express. Twenty-three persons were killed, and 56 seriously injured.

January 8. Near Kostov, in Southern Russia, a rear-end collision caused six deaths and many injuries.

January 29. At Harrison, N. J., a passenger train of the Lackawanna R. R. crashed into a stalled electric train seriously injuring three persons.

February 10. At the Karian-Stroganoff station, about 475 miles southeast of Moscow, Russia, a head-on collision between a passenger train and a freight train resulted in 18 deaths and 9 persons seriously injured.

February 17. Near Tiflis, Russia, three persons were killed and 12 injured when a passenger train ran through an open switch into a freight train.

April 7. On the main line between Ringe and Svengbord, Denmark, a collision between two trains due to faulty signals caused 13 deaths and 57 injured.

April 14. At Marche Prime, France, 3 were killed and 10 injured by a derailment of the Pyrenees Silver Coast Express, caused by a broken flange.

April 17. At Heatherton, Nova Scotia, an express train of the National Railways went off the rails, killing the engineer and four others.

June 16. At Welwyn, 20 miles north of London, England, a news train crashed into the rear of a passenger train killing 14 persons and causing serious injury to 29.

June 21. In a head-on collision in a fog near Deodora, 10 miles from Rio de Janeiro, 4 persons were killed and 20 seriously injured on the Brazilian Central Railway.

July 5. Cloudbursts in eastern Montana undermined the tracks of the Great Northern Railway near Culbertson, and of the Chicago, Milwaukee & St. Paul Railway near Baker, causing wrecks on each line and injuring 22 persons.

August 4. At Neufchatel, France, a train crowded with holiday travelers crashed into a standing freight, causing critical injuries to eight persons.

August 6. In the southeastern Caucasus, Russia, a collision between freight and passenger trains seriously injured eight persons.

August 10. Near Springfield, Ohio, a head-on collision between a work-train of the Cincinnati & Lake Erie and an interurban passenger car killed four persons outright and caused critical injuries to 15 others.

September 14. In the derailment and subsequent burning of a train of tank cars of the Illinois Central R. R. near Monroe, Louisiana, at least 9 transients were killed and 7 were injured.

October 16. Near São Francisco Xavier, Brazil, two passenger trains of the Brazilian Central Railway collided. Eight persons were killed and 83 injured.

December 8. Near Naples, Italy, in disregard of signals, a Sicily express crashed into the rear of the Rome express. Nine passengers were killed and 50 injured.

December 24. At Gross Heringen, Germany, the Berlin-Basle express side-swiped a local train that, loaded with holiday passengers, had just left the station against signals. Several coaches were hurled into the frozen river over which the trains were passing. The known killed numbered 36, with 22 persons critically injured.

RAILWAYS. The sale, on Sept. 30, 1935, of 2,054,492 shares of the Alleghany Corporation carrying control of the Chesapeake and Ohio Railway, the Erie, the New York, Chicago, and St. Louis (Nickel Plate), Pere Marquette, Chicago, and Eastern Illinois, and possibly the Missouri Pacific and the Denver and Rio Grande Western, to a group of men unconnected with the powerful bankers who have heretofore kept control of large railways as their private game preserve, gave a measure of the level to which steam railway credit had sunk by 1935. The Van Sweringen brothers held control of 25,000 miles of railway through a holding company device centering in the Alleghany Corporation. Controlling stock of the Alleghany Cor-

poration was pledged as collateral for a loan from the banking firm of J. P. Morgan. The Midamerica Corporation bidding through L. P. Ayres, Vice President of the Cleveland Trust Company, bought in the block of collateral, of which the common stock of the Allegheny Corporation was the principal item, for \$3,121,000. The loan, including interest, amounted to \$50,000,000. The price received for all of the collateral totaled \$4,703,000.

Bridge Across the Mississippi River. Heretofore there was no bridge across the Mississippi south of Vicksburg. A rail and highway bridge was started at New Orleans. At present, the Southern Pacific trains are ferried across the river at that city. The New Orleans Belt Railway, which is a municipal institution, obtained a loan from the Federal Reconstruction Finance Corporation in 1932 to pay for a bridge across the river at New Orleans. In 1935 the structure was nearly completed. The river span is 3524 ft., 10 in. The east approach is 10,971 ft. The clear head room is 135 ft. See **BRIDGES.** State aid to railways as manifest by the financing of the Moffat tunnel west of Denver, the electrification of the Pennsylvania Railroad, and the bridge building in 1935 across the Mississippi is in contrast with the land grants, etc., given the transcontinental railways earlier.

Coöperation Between Railways. The Minneapolis and St. Louis running west from Minneapolis into South Dakota and south from Minneapolis toward St. Louis, which had for years presented an insoluble problem of profitable, independent operation, was taken over by the Chicago and Northwestern; the Chicago, Burlington, and Quincy; the Chicago, Great Western; the Chicago, Milwaukee, St. Paul, and Pacific; the Chicago, Rock Island, and Pacific; the Great Northern; the Illinois Central, and the Minneapolis, St. Paul, and Sault Ste. Marie railways. Many railway operating men believe that the joint operation of this property will result in economies. The very substantial banker's profits incident to a reorganization were absent in the 1935 solution of a heretofore baffling problem.

Under date of June 12, 1935, Joseph B. Eastman, Federal Coordinator of Transportation, submitted a report to the Regional Coordinating Committees showing the economies that might result from the establishment of a consolidated agency in New York City to take over the fiscal work of railways heretofore conducted through offices maintained separately by railways or through outside agencies. The estimated saving was over three quarters of a million dollars. The sum is not large when compared with total railway expenses, but it is noteworthy because it cuts off a potential source of profit to those who control a railway company.

Eastman Freight Traffic Report. On May 6, 1935, Joseph B. Eastman, Federal Coordinator of Transportation, sent a three-volume report to the Regional Coordinating Committees. It was the first really comprehensive study of the transportation situation in the United States ever made. It was summarized by Mr. Eastman as follows:

The report is the result of concurrent surveys of freight transport operations of all types of carriers. It assembles traffic, service, charge, and operative data, essential to design a coordinated system of transport, utilizing all types of facilities and agencies.

Freight transport tends to become unprofitable because of a surplus of facilities, competitive rate-making and service, and utilization of obsolete equipment, plant and methods as well as less economical modes of transportation.

It appears unlikely that increased production within the immediate future will provide a volume of carrier freight

as large as that which existed prior to 1930. This is true because of the relocation and decentralization in industry, change in power and fuels, and increase of private transportation.

The bulk of American traffic is produced in small towns but principally consumed in large cities. Basic materials are produced in the South and West and processed and largely consumed in the East.

American commerce has definitely assumed a national aspect. This development requires subordination of provincial to national consideration in dealing with carrier relations, facilities, operations, and charges. Modern business demands celerity in movement, universal door-to-door service, and equipment adapted to business needs.

The potential superiority of the railway, resulting from its road speed, is dissipated by voluntary restrictions, infrequent schedules, and frequent yardings and interchanges. As a result, a large volume of carload traffic now moves by highway.

Equipment is now available whereby rail and water carriers can render complete service to all patrons economically.

The motor vehicle is superior in its ability to synchronize its schedules with the patron's needs. Rail and water carriers are handicapped by a limited number of schedules, and by operation of parallel schedules for competitive reasons. Rail carriers have it within their power to reduce, if not to overcome, this handicap.

Carriers can reduce substantially the shipper's cost of transportation by providing vehicles which are shock proofed to reduce packing, fitted with economical temperature control apparatus, and constructed to facilitate cheap loading and unloading.

The present system of freight charges should be reorganized to meet conditions, which have resulted from the ability of the shipper to provide his own transportation.

The present carlot sales unit and minimum weight requirements, no longer adapted to commercial needs, are conducive to uneconomical loading, and tend to divert cargo shipments from the railways. The price scale should vary with the size of shipment, from a ton to a train load, permitting shipments in any amount, but creating an incentive for full instead of minimum loading.

Modern conditions require that all commodities be classified objectively into a limited number of groups, according to nature, utility, and state of processing, and that such groups be rated solely with respect to their potentialities to produce the maximum volume of profitable traffic, excluding consideration of cost characteristics.

The present level of railway rates generally is higher than that of other carriers, and in many cases exceeds the cost to the shipper of providing his own transportation. To assure efficient and stable service, the price level should be designed to make transportation profitable.

The data indicate that different carrier rate structures, in different territories, are no longer justified by present conditions. To avoid discrimination among shippers and uneconomic distribution of traffic between carriers, the present rate structure should be readjusted to evaluate the distinctive cost characteristics of shipments.

Tariff complexity can be reduced and the utility increased by unification of rate systems and publishing authorities, by simplifying commodity classification and by grouping carrier routes into a limited number of definite channels.

Capacity of present transport facilities appears to exceed the prospective demand. Additional facilities are justified only when their economic superiority makes present facilities obsolete, and when demanded by general as distinguished from individual or local welfare.

Additional cost of transport, resulting from the circuit of the average rail shipment, can be reduced by cooperative group routing.

To provide an equivalent amount of transport service the pipe line carriers require the least in capital investment, and the rail carriers the most, if governmental expenditures for waterways and highways be excluded. The cost of operative transport is cheapest in the case of water cargo carriers, and most expensive in the case of rail and water carlot carriers.

Due to the burden of an exclusive transport way, rail and pipe line unit costs for maintenance of fixed plants are relatively the same, and if government expenditures for maintenance of waterways and highways be excluded, much higher than the comparable costs of carriers using such ways.

The data indicate that in thin traffic areas, consideration should be given to the utilization of small power freight cars and light locomotives which manufacturers now offer.

A railway car of shock-proof chassis, with multiple sets of containers, which are interchangeable between railway, waterway, and highway vehicles, accessible for economical loading and unloading and are versatile in design, adapted to present-day sales units, would improve transportation service, reduce its cost, and discourage uneconomic distribution of traffic.

The cost of operating carrier facilities is relatively

greater for carlot than for cargo carriers. Substantial economies in rail transportation costs appear possible in operation of freight station facilities and in assemblage operations.

Rail overhead expenditure for executive direction, sales promotion, and insurance are relatively lower than comparable expenses of the other types of carriers, while rail tax expenses are relatively higher.

Economy in rail yard service has been sacrificed to attain economy in road movement by heavy train loading, with the result that yard costs are greater than road costs. The terminal cost of rail and water carlot carriers far exceeds that of other carriers and is about twice the cost of highway service.

Due largely to intermediate yardings and to the distribution of freight from terminal centres by way of trains, rail line costs are relatively higher than the costs of comparable services of all other transport media, except highways.

It appears that rail transport can be improved and its cost reduced by motorizing many collection and delivery services, establishing cargo (train load) service, and, in the case of many distributive operations, by substituting small-powered light trains of a few cars for conventional trains of cargo type but of carlot consist.

The present policy of wide-open routing leads to preferential treatment of shippers, undue prolixity and complexity in tariffs, circuitous routing, unnecessary interchanges, excessive terminal delays and thereby burdens industry, as well as the carriers, with avoidable waste.

Coordination seeks, by a speedy, complete, convenient carrier service at simple, cheap but profitable rates, to develop the nation's transport adequately to fulfill every need of industry, promote trade and commerce among its citizens, develop markets of production and distribution, and stabilize the industry to the end that labor and capital employed therein shall be well compensated and made secure. To attain these objectives, it proposes to eliminate evil competition, to fuse common facilities of whatever kind into a single transport system, and to integrate joint functions into common agencies.

Integration of commerce, territory, and industry makes necessary a parallel integration in joint carrier agencies of the common functions of pricing, through scheduling, redundant service, routing, marketing, and research.

Each form of transport is superior to each other form in some important respects, and inferior in others. All should be integrated by joint rates, interchangeable equipment, and common facilities, under a programme designed to use each form in the field of its greatest utility.

Wherever necessary for serviceable, efficient, or economical operations, all carrier equipment, terminals, and facilities should be used jointly and interchangeably by carriers of all types, under appropriate and fair user arrangements.

The suggested plan of coordination will promote public welfare and at the same time protect and conserve the interests of owners and employees of the transportation industry.

Eastman Report Suggesting Legislation. Legislation subjecting highway and waterway carriers to regulations similar to that now enforced on the railways was suggested by the Federal Coordinator in a report sent to the Interstate Commerce Commission. The Commission, in sending the report on its way toward Congress, in the letter of transmittal dated Jan 23, 1935, said: "The bills for the regulation of water and motor carriers we regard as vital. Upon their early enactment depends the preservation and development of a healthy, adequate coordinated system of transport for the nation. We can have such a transport system only by unified regulation of these important competing agencies."

This report, while made public before the one on Freight Traffic, can be understood only when taken in connection with the later report. Besides suggesting this legislation, this report gives three plans which may be followed in the future development of the transportation system of the United States.

Plan I. This would put all transport agencies under the Interstate Commerce Commission acting through a coordinator. Provision to be made for supernannuated employees of railways. Improvement to be made in the reorganization and bankruptcy proceedings of railways. Improvement to be made in the labor conditions of agencies other than railways. Plan I would have to be carried out voluntarily under private management and by the use of private credit.

Plan II. This would provide for a corporation that

would acquire all railways and other transport agencies through the exchange of government-guaranteed debentures, having a sinking fund, for outstanding securities. The stock of the corporation would be owned by the government. Preferred stock and income bonds would be sold to private individuals. Direction would rest with five trustees, three appointed by the President and two elected by the holders of preferred stock and income bonds. These trustees would have salaries of the same amount as those of members of the Supreme Court. They would work under a declaration of trust to manage the properties in the public interest and to earn interest on the income bonds, dividends on the preferred stock besides fixed charges (interest on the debentures). There would be an advisory council of 24 unpaid men selected by business, labor, and agriculture. Their advice would be made public.

Plan III. This would be government ownership and operation. The railways would be taken over by the government as they were during the war. The President would appoint five trustees who would select a director general.

In Mr. Eastman's opinion, Plan I would work in the unlikely event of whole-hearted cooperation on the part of those in control of railways. If Plan I fails he thought Plan III would be adopted, seeing little sentiment in favor of Plan II.

Expenditures. There was a drastic curtailment of upkeep expenditures on railway properties from 1930 to 1933 with a somewhat larger expenditure in 1934 as compared with 1933, and in July, 1935, considerably greater amounts were spent for maintenance as compared with July, 1934. Railway officers could and did take steps to correct the trend of property repair and replacement but railway credit was not in their control.

In July, 1935, \$38,028,346 was spent for repair and replacement of railway track and buildings as compared with \$34,356,187 spent in July, 1934. These figures were reported to the Interstate Commerce Commission under oath and were exactly comparable except that the mileage reporting in 1935 was 237,700 and that reporting in 1934 was 239,002, so the spread was slightly greater than was indicated by difference in number of dollars.

An idea of the condition of railway property in 1935 may be had from a comparison of the expenditures on upkeep since 1925. In 1926 the Class I railways spent, in round numbers, \$2,130,000,000 for repairs and replacements of track, buildings, and rolling stock. At that rate they should have spent \$10,650,000,000 in the five years 1930 to 1934 inclusive. Actually, they spent \$5,957,000,000. There was at the beginning of 1935 deferred maintenance, on the basis of 1926 expenditures, of \$4,693,000,000. In 1935, the railways spent \$1,071,000,000.

There were many indications that private banking capital would be reluctant to finance this huge amount of deferred maintenance. Government financing of that as well as betterment of the railways is an alternative.

A start in rehabilitation work was made prior to 1935 through loans for the repair or replacement of cars and locomotives. Total loans to railway companies from the Reconstruction Finance Corporation (a U.S. government agency) amounted on Nov. 30, 1935, to \$487,123,572, of which \$74,327,446 had been repaid.

Rehabilitation work does not appeal to the imagination as strongly as new construction. Public aid for new construction, therefore, was forthcoming before loans for rehabilitation. Railway men themselves saw the need for a higher standard of maintenance as their limited higher expenditures in 1935 show, but it was in loans for new construction that government aid, local or national, manifested itself.

Electrification of the Pennsylvania Railroad between New York and Washington, D. C., had been made possible through loans from the national gov-

ernment. The work was nearing completion in 1935.

Miscellaneous. Erie Loan Extended. In October, 1935, the Interstate Commerce Commission approved the extension for three years of a loan of \$12,110,310 which the Erie Railroad had obtained from the Reconstruction Finance Corporation.

Denver and Rio Grande Western Reorganization. In October, 1935, the Denver and Rio Grande Western made application under section 77 of the Federal Bankruptcy Act to reorganize.

Other Railroads. The year 1935 was one of cleaning up financially for the railways—the top heavy Van Sweringen holding company device discredited, the Minneapolis and St. Louis made use of jointly, the New York, New Haven, and Hartford giving up the boot strap method of lifting itself out of its difficulties, the Denver and Rio Grande, which the Goulds had used as a base on which to build a transcontinental railway system, making efforts to straighten out its own affairs, the Erie, a sound transportation property, carried along by the government.

On the technical side the developments of the year were towards replacement of the steam locomotive by some other form of traction. Beginning electric operation of the Pennsylvania New York to Washington line, a 9-car train, consisting of a streamlined, 4800-h.p. electric locomotive, 1 passenger baggage car, 2 passenger cars, 1 Pullman compartment car, 3 parlor cars, 1 dining car, and 1 observation car, was run from Washington to Philadelphia and return on Jan. 28, 1935, making an average speed for the entire trip of 74 miles an hour.

The Union Pacific began a passenger service between Portland, Ore., and Chicago, with a 7-car articulated train hauled by a 1200 h.p. Diesel-electric locomotive. There were 12 stops in a run of 2274 miles, the average speed being 57.1 m.p.h.

The reduction of weight of passenger trains would have increased relatively the factor of air resistance, but this was just about offset by the streamline design of cars and locomotive.

Alloys of steel were used to reduce the non-revenue weight of freight cars. The Chesapeake and Ohio Railway put in service a hopper car, the capacity of which was 134,400 lb., and the weight of the empty car was 34,600 lb., increasing the ratio of revenue load weight to gross weight from 75 per cent to 79.5 per cent. The cars were built of Cor-ten steel.

The Pullman Company, using Cor-ten steel, built a standard box car, reducing the weight of the car by 5 tons.

New York, New Haven, and Hartford Troubles. In the New Haven situation, many of the factors of the general railway problem are intensified. At a time when trolley and water transport competition was making the operation of the steam railway unprofitable, the late J. P. Morgan, father of the present head of J. P. Morgan and Co., instructed C. S. Mellen, then President of the road, to buy up competing trolley and water lines. Even if this had been legal it did not prove profitable. Then E. J. Pierson became President of the New Haven. He built two large railway yards, one at the east end of the system, the other at the west end. Operation of the railway was carried on profitably. Then bus and private automobile competition proved too great. In 1935 the New Haven applied to the Reconstruction Finance Corporation for a loan of \$5,000,000, but the Interstate Commerce Commission, having the duty of passing on

the loan, disapproved of it. The New York, New Haven, and Hartford applied under section 77 of the Bankruptcy Act to reorganize without receivership. On October 31 the railway company was ordered by the United States District Court at New Haven to withhold interest on underlying bonds, but the court authorized the payment of what amounts to interest on certain equipment trusts.

Pensions. On August 19, a new pension tax bill was passed by Congress which was thought to meet the objections that the courts had found to the former pension tax bill. The new bill provided for a tax of 7 per cent on railway pay rolls, 3½ per cent to be paid by the employers and the other 3½ per cent to be paid by the employees. The bill provided for retirement at the age of 65 or after 30 years' service. The maximum pension is \$120 a month.

Railway-Owned Busses. The Southern Pacific has two rail routes from Los Angeles, Calif., to San Francisco, one following the coast and one through the San Joaquin Valley. In 1935 the Pacific Greyhound lines, allied with the Southern Pacific, put into service sleeper coaches having accommodations for 25 passengers, making the run from Los Angeles to Kansas City in 52 hours. The fare is \$24, and \$5 is charged for a single lower berth and \$7 for a double lower.

Wages. There have been no reduction in railway wage scales since 1934. By the beginning of 1935, cuts in railway labor pay had been completely restored. In the first four months of 1935 there were about 40,000 less men employed on railways than in the first four months of 1934.

Revenue and Expenses. The income account for class I railways in 1935 as compared with 1934 was

	1935 (in millions)	1934 (in millions)
Total operating revenues . . .	\$3,440	\$3,272
Total operating expenses . . .	2,575	2,442
Taxes . . .	238	240
Net railway income . . .	500	460
Deficit after fixed charges . . .	15	17

The breakup of revenue and expenses follows.

	1935 (in millions)	1934 (in millions)
Freight revenue . . .	\$2,780	\$2,634
Passenger revenue . . .	355	346
Mail revenue . . .	92	91
Express revenue . . .	53	54
All other . . .	160	147
Total . . .	\$3,440	\$3,272
Maintenance of way expenses . . .	\$ 399	\$ 365
Maintenance of equipment . . .	672	628
Traffic expenses . . .	93	89
Transportation expenses . . .	1,241	1,164
General and other expenses . . .	170	186
Total expenses . . .	\$2,575	\$2,442

Railway Built and Abandoned. There were 45 miles of new first track, 12 miles of new second track, and 1 mile of new third track built in the United States in 1935. This compares with 76 miles of first track built in 1934 and with 6026 miles of new first track built in 1902, the year in which the greatest number of miles was built according to the records of the *Railway Age*. The railway mileage abandoned in 1935 was 1843, comparing with 1995 in 1934, the year in which the greatest number of miles were abandoned according to statistical records of the *Railway Age*. The only State in which as much as ten miles of

new railway line was built in 1935 was Utah where the Union Pacific built 10.79 miles from Iron Springs to Iron Mountain on its Salt Lake-Los Angeles line.

Locomotives Ordered. There were 125 locomotives ordered from United States builders in 1935, 83 for service in the United States, 27 for service in Canada, and 15 for export to other countries. This compares with 200 ordered in 1934 of which none were for service in Canada but 17 were for export to other countries.

Locomotives Built. There were 201 locomotives built in the United States in 1935 of which 184 were for domestic service and 17 were for foreign service. This compares with 110 built in 1934 of which 91 were for domestic service and 19 for foreign service.

Freight Cars Ordered. In 1935 there were 21,230 freight cars ordered from builders in the United States. Of these 18,699 were for domestic use, 2421 were for use in Canada, and 110 were for export. This compares with 25,946 ordered in 1934 of which 24,611 were for domestic use, 1323 were for use in Canada, and 12 were for export. There were 7821 cars built in the United States in 1935 and 25,327 built in 1934.

Passenger Cars Ordered. In 1935 there were 79 passenger cars ordered from United States builders of which 63 were for domestic use and 16 for use in Canada with none for export. This compares with 403 ordered in 1934, none of which was for use in Canada and 15 of which were for export.

There were 179 passenger cars built in the United States in 1935 all of which were for domestic service. In 1934 there were 283 built of which 268 were for domestic service and 15 for foreign service.

Equipment Prices. Prices derived from reports of the Interstate Commerce Commission may not be strictly comparable because details are not obtainable but are given for what they are worth. In 1935 a passenger locomotive weighing 475,000 lb. was bought for \$120,898 and in 1934 a passenger locomotive weighing 477,400 lb. was bought for \$122,000. In 1935 a 40-ton steel box car was bought for \$2135 and in 1934 a 50-ton steel box car was bought for \$2411. In 1935 a streamlined Diesel-electric five-car train cost \$423,085.

New Financing. The total face value of new securities of railways sold to the public in 1935 was \$144,028,000. In 1934 the total was \$243,142,000. None of the offerings to the public in 1935 was made by J. P. Morgan because that firm, heretofore looked upon as the outstanding railway bankers of the world, had withdrawn from the underwriting business.

The largest railway issue in 1935 was that of the Pennsylvania Company, an issue of \$50,000,000 4 per cent bonds due in 1963 and secured by Norfolk and Western Railway stock. The bonds were sold to Kuhn, Loeb and Company at 97½ by the railway company and offered to the public by the bankers at 100. An issue of \$16,000,000 4 per cent bonds of the Chicago Union Station was sold by the Station Company to Kuhn, Loeb and Company at 98½ and offered to the public by the bankers at 101. The bonds are due in 1963. The New York Central, its bankers heretofore being J. P. Morgan, sold an issue of Toledo and Ohio Central, guaranteed by the New York Central, 3¾ per cent bonds due in 1960. The amount of the issue was \$12,500,000 and the price paid the railway com-

pany by the bankers was 97, the offering price to the public was 99. The Bankers in this case were the First Boston Corporation. An issue of \$12,000,000 5 per cent bonds due in 1945 of the Atlantic Coast Line railway (bankers heretofore J. P. Morgan) was bought from the railway company for 97 and offered to the public at 100 by Brown, Harriman and Company.

Refunding. The Great Northern Railroad had an issue of \$100,000,000 7 per cent bonds falling due in the latter part of 1935. Private bankers had offered to underwrite the refunding of these bonds with an issue of 5 per cent bonds for a commission of about \$1,000,000. The Reconstruction Finance Corporation, a government agency, underwrote the sale of \$1,000,000 4 per cent bonds at par without commission. Indications were that the offering would be a success. This is of the greatest importance because, heretofore the periodically recurring necessity for refinancing was the strangle hold which an individual banking firm had on a railway company.

Receiverships and Foreclosure Sales. There were in all 16 railway companies placed in the hands of receivers or trustees in 1935. Three of these were subsidiaries of the St. Louis Southwestern. The total mileage of all of the roads was 29,018. The total funded debt outstanding was \$1,281,864,412. The total stock outstanding was \$901,114,755. Legally there is a difference between placing a railway in the hands of a receiver and in the hands of a trustee. In both cases a need for reorganization is acknowledged but with a receivership bankruptcy is an established fact. The establishment of this fact is not necessary. Comparing receiverships only the records of the *Railway Age* show 10 railways with a total mileage of 3953 placed in receivers' hands in 1935 and eight with a mileage of 744 placed in receivership in 1934. The larger railways that were placed in the hands of receivers or trustees during the year 1935 were: the Chicago and North Western, 8428 miles, the Chicago, Milwaukee, St. Paul, and Pacific, 11,123 miles; the New York, New Haven, and Hartford, 2073 miles; the Denver and Rio Grande Western, 2584 miles; the Western Pacific, 1213 miles; and the St. Louis and Southwestern, which with its three subsidiaries has a mileage of 1780.

The receivership of the Chicago and North Western is especially noteworthy because it is a conservatively capitalized railway company. The development of the property has been conservative and, heretofore, its geographical position has been considered most favorable. Its main line connects the eastern end of the Union Pacific with Chicago. It has a network of lines in Wisconsin, Iowa, and South Dakota. Neither busses nor aeroplanes have cut drastically into its business. Grain and livestock furnish a large part of its freight business. While the country that it serves and the country west of the Missouri River were being developed it had a westbound freight haul of settlers' goods which were required for the establishment of homes. Even if grain and livestock had continued to move east in increasing volume there would have been scant loading for westbound cars after new settlement had ceased. Only a few years ago Chicago and North Western bonds were considered a very conservative investment for sav- ings banks.

There were only five small railways sold at foreclosure in 1935. It denotes the same thing to say that there were only 437 miles of railway

bought at foreclosure in 1935 but it connotes the situation more correctly.

Dividend Changes. The Pittsburgh and Lake Erie, controlled by the New York Central, paid \$1 extra on the common stock in addition to the regular \$2.50 paid annually on that stock. The Alabama Great Southern, controlled by the Southern Railway, omitted the \$2 dividend usually paid in December. The Wheeling and Lake Erie made a payment of \$8.75 towards cumulated back dividends on its prior lien stock on which the arrears had amounted to \$43.75.

Rates. The Interstate Commerce Commission allowed a temporary increase in certain freight rates, the increase to expire on June 30, 1936.

RANDOLPH-MACON WOMAN'S COLLEGE. An institution for the higher education of women in Lynchburg, Va., under the auspices of the Methodist Episcopal Church, South, founded in 1893. The enrollment for the autumn of 1935 was 631. The faculty numbered 60. The endowment amounted to \$1,203,630, while the income for the year was \$407,762. The library contains 43,003 volumes; 191 current periodicals, a browsing room of 1300 volumes, the gift of the Carnegie Corporation; and a rare book room. President, Theodore H. Jack, Ph.D.

RAPID TRANSIT. As has been previously noted, subway construction is confined to our largest cities where traffic volumes and surface congestion force recourse to costly underground work for rapid transit. We have been through a great era of subway building in New York, and it seems probable that, for some years to come, there will only be scattered and, compared with these recent works, small scale constructions. It has been reported that San Francisco is seeking Federal aid for the construction of the first subway transit system in that city. Tentative plans, estimated to cost 50 million dollars, have been prepared.

In New York one link of the Municipal System, built a few years ago, was not completed. Construction of the so-called Sixth Avenue subway was postponed until the completion of the new water supply distribution Tunnel No. 2 because this subway followed the line of Tunnel No. 1, which furnished the only means of distributing the Catskill supply to lower Manhattan, Brooklyn, and Staten Island. Tunnel No. 2 has now been finished and bids have been taken for the Sixth Avenue construction.

RAYON. According to the annual statistical survey of the rayon industry by *Rayon Organon*, the world production for 1935 was estimated at about 950,000,000 lb. as compared with 775,000,000 lb. in 1934. The estimate is based on the known production of Japan and of the United States for the year and upon partial returns from the other leading producing nations, which indicate that the total for the year was about 22 per cent greater than in 1934. Japanese production increased 40 per cent, rising from 153,000,000 lb. in 1934 to 215,000,000 lb. in 1935.

In the United States rayon production increased 23 per cent over 1934, with a total of 256,659,000 lb. as compared with 208,496,000 lb. in 1934. Domestic consumption reached a new high figure of 251,722,000 lb. compared with 194,808,000 lb. in 1934. During the calendar year 1935 the United States exported 2,187,192 lb. of rayon yarn, valued at \$1,158,604. Total exports in 1934 amounted to 2,509,067 lb. valued at \$1,322,595. Imports of rayon yarn to Dec. 31, 1935, totaled 25,815 lb. valued at

\$25,623, a further decline in imports which had reached a peak of more than 15,000,000 lb. in 1929.

READING, rēd'ing, RUFUS DANIEL ISAACS, FIRST MARQUIS OF. A British statesman, died in London, Dec. 30, 1935, where he was born, Oct. 10, 1860. Educated at University College School and in Hanover and Brussels, as a boy he went to sea as a "ship's boy" on a tramp steamer, but later began a city career as a jobber on the Stock Exchange. His firm failing, young Isaacs decided to embrace the law and at the age of 24 entered the Middle Temple. He was called to the bar in 1887, and his experience in the city proved beneficial, being the cause of his retention in many financial cases. He became a queen's counsel in 1898. He began his parliamentary career in 1904 as a Liberal member for Reading, holding his seat until 1913. During the years 1905-10, he advanced steadily in his profession, becoming known as an eminently fair attorney with great ability as a cross-examiner, but his success in the Courts was not repeated in the House.

In 1910 he became Solicitor-General and soon succeeded to the Attorney-Generalship. Also in that year he was knighted. In June, 1912, Asquith made him a member of his cabinet, an honor which no attorney general had ever before received. Like Chancellor Lloyd-George, he was accused of speculation in Marconi stocks, admitted the charge, and seemed to lose nothing in political prestige.

Succeeding Lord Alverstone as Lord Chief Justice in 1913, in the following January he was made baron, taking the name Lord Reading. His dignity, courtesy, and carefully delivered judgments were the highlights of his judgeship. His ability and experience in financial matters led to his being enlisted by the Chancellor of the Exchequer for aid in the financial crisis of 1914. In the following year he was made Knight Grand Cross of the Bath, and in the autumn was appointed a member of the Anglo-French Loan Mission to America, which proved the turning point of his career.

So successful was he in his conduct of the affairs of the mission, that in 1917 he was appointed Special Envoy to America, and in 1918, on the death of the British Ambassador, he was made High Commissioner and Special Ambassador, while still retaining the office of Lord Chief Justice. In the meantime, he had been raised in the peerage, becoming a viscount in 1916 and an earl in 1917. In 1919 he returned to England.

Three years later, the Earl was appointed Viceroy of India, an appointment that was met with some dissatisfaction, for India at that time was seething with unrest. Reading's policy was one of patience and conciliation as well as persistence and firmness, and his tact and justice won him the respect of all classes. He consulted with M. Gandhi, and although the Home Government was desirous of Gandhi's arrest, Reading felt it would be unwise to make a martyr of him, especially when his popularity was so great. The threat of resignation by two of the more important Governors, however, led him to alter his plans. During his first year in office the country was visited by the Prince of Wales, and in certain sections hostile demonstrations took place. During his régime, the financial condition of the country improved, due in part to the Viceroy's experience and also to bumper crop production, and at the expiration of his term in March, 1926, he was made a Marquis and returned to England,

where he was given the Freedom of the City of London in June.

In 1927, he became chairman of the United Newspapers, Ltd., the publishers of a group of Liberal papers, and gradually took up various business activities. He was a member of the Indian Round Table Conference in 1931, and of the joint Select Committee, which in 1933-34 laid down the principles that were followed by the Government of India Act in 1935. In August, 1931, on the fall of the Labor Government, he was appointed a Secretary of State for Foreign Affairs in the National Cabinet of Ten formed to pass a supplementary budget, but it dissolved after the abandonment of the gold standard. From 1926 to 1934 he was captain of Deal Castle, and from 1934, Lord Warden of the Cinque Ports. In 1933 he resigned the presidency of the Anglo-German Association, which he had held since 1929, because of the treatment accorded to Jews in Germany.

RECLAMATION. Irrigation projects in the United States, other than those involved in such constructions as the Boulder Dam and as may ultimately develop from the Grand Coulee and other works, appear to be at a standstill. This situation seems reasonable when we recall that through the AAA and similar agencies, the Government is now attempting not to develop new areas but to curb agricultural production and reduce crop acreage. In fact, with these points in mind, it becomes increasingly difficult to justify the whole reclamation policy of the Federal Government. It seems to have been foolish for the Reclamation Bureau to build works to bring new areas under cultivation and thus contribute to the evils of agricultural overproduction.

The Bureau of Reclamation came into action (1902) after the best and most economically favorable areas had already been developed by private or district organizations. Even today its works serve but 7.6 per cent of the irrigated lands of the United States. Furthermore, it undertook to add to the cultivated lands of the country at a time when the area of such lands was already close to the limit which could be profitably operated. From the economic standpoint, it thus started with handicaps impossible to overcome and, judged by tangible economic values, it has been an economic failure. While the Bureau has built some magnificent works and has improved the standards of irrigation practice, it has, because of these handicaps, failed to demonstrate that the Federal Government can develop the public lands on a sound economic basis. It seems probable that no reclamation through irrigation on a large scale will be undertaken for some years to come.

On the other hand, the nation has recently become conscious of the fact that soil erosion has been, in some cases rapidly, destroying the land values in many areas. The western dust storms plus continuous propaganda have suddenly brought this new problem of conservation to the fore. The present programme of the Federal Government calls for an expenditure of half a billion dollars in soil protection works. This sum exceeds the entire expenditure of the Reclamation Bureau yet we are, apparently, to undertake, with comparatively little knowledge of the problem or of its importance, another gigantic spending policy which, to many engineers, appears to be simply another means of disposing of relief funds. Normal prudence and care would suggest undertaking work in a totally new field on a programme of progressive

study and expenditure rather than through a sudden stupendous venture into the unknown.

RED CROSS, THE AMERICAN NATIONAL. A semi-governmental organization, chartered by Congress in 1905 to furnish volunteer aid to the sick and wounded of armies in time of war and to continue and carry on a system of national and international relief in time of peace, the same being applied in mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities.

Aiding more than one half million victims of 160 different disasters during 1934-35, the Red Cross answered more calls for help in the United States and its insular possessions than during any other 12 month period in its history. One hundred twenty-eight of these disasters affected 37 States and the territory of Alaska, establishing a new record for frequency which is 50 per cent higher than the average for the past 10 years. During one summer week of 1935 the Red Cross was simultaneously bringing relief to 38 disaster stricken communities in 15 States.

A total of 20 Disaster Institutes were held at strategic points, following out the disaster preparedness programme inaugurated the preceding year. They brought together chairmen and members of disaster committees, community leaders, city and state officials, and representatives of police, fire, and health departments. In addition, the subject of Disaster Preparedness and Relief was presented at 22 Red Cross Chapter Institutes, attended by chapter officers and workers.

Also notable during the past fiscal year has been the cooperation of Red Cross First Aid Service with the Civilian Conservation Corps in training selected men from CCC camps in first aid, of whom more than 64,000 received certificates. A similar plan was initiated for the training of selected men from these camps in Life Saving and water safety methods during the summer months.

Altogether First Aid certificates were awarded to 187,255 persons completing the course, and Life Saving certificates were awarded 74,274. The millionth First Aid certificate to be awarded since the inception of this Red Cross service 25 years ago was presented by Chairman Cary T. Grayson in November.

In the fiscal year ending June 30, 1935, chapters reported aid given to 223,042 civilian families. Co-operating with the Federal Emergency Relief Administration many Chapters continued to aid transient veterans, and assisted the FEERA's adult education programme for the unemployed through the use of unemployed teachers, organizing classes in the various Red Cross Services.

The Red Cross, through its local Chapters, assisted 286,984 ex-service men and service men or families; and 59,756 ex-service and 27,379 service men or families were aided by National workers in army posts and government hospitals. The nurses' reserve closed the fiscal year with 35,703 on the active list and Red Cross Public Health nurses made 1,156,003 nursing visits and inspected 633,944 children in schools. At the close of the year, 766 Public Health nurses were employed by 434 Chapters. Home Hygiene instruction was given to 68,555 persons.

Special services performed by volunteers, backbone of the Red Cross, included 1,252,333 garments produced by Chapter volunteers; 320,406 pages of braille made by hand and 344,811 by the duplicating process. Motor Corps, Canteen and many other volunteer activities continued to meet all needs. The

number of enrolled volunteers, excluding those engaged in disaster relief, stands at 135,026.

The organization's senior membership totaled 3,837,941 for the year ended June 30, 1935, and the Junior Red Cross membership during the school year was 7,752,243. Both memberships showed an increase over the previous fiscal year.

The President of the United States is president of the Red Cross, which is governed by a board of 18, of whom six are appointed by the President. Adm. Cary T. Grayson, appointed Feb. 8, 1935, by President Roosevelt to succeed the late John Barton Payne, is active head of the organization and Chairman of the Board, and James L. Fieser and James K. McClintock are vice-chairmen. The National Red Cross, with branch offices in St. Louis and San Francisco, directs the relief activities of 3711 Chapters and 9112 Branches active in practically every county in America.

REED COLLEGE. A nonsectarian, coeducational college of liberal arts and sciences in Portland, Oregon, founded in 1911. The enrollment for the autumn of 1935 is as follows: men, 266; women, 182, total, 448. Faculty, 35. A Director of Admissions was appointed in September, 1934. The productive endowment funds for 1934-35 amounted to \$1,826,281.67, and the total income for 1934-35 (exclusive of gifts) was \$148,651.46. The college operating budget for 1934-35, \$154,500. The library contains approximately 52,000 volumes. An unusual event was the Inaugural Education Conference held May 15 to 18, 1935, to discuss the educational problems of Reed College with the aid of nationally known experts, in lieu of the usual type of Inaugural for Pres. Dexter M. Keezer. Dr. Keezer became President of Reed College in September, 1934. In July, 1935, the first meeting in this country of an American-Japan Student Conference was held on the Reed campus, with 50 Japanese college and university students in attendance, and about 100 American students from Pacific Coast educational institutions.

REFERENDUM. United States. While 1935 was what is called an "off year" in that fewer elections were held than in even years, the volume and importance of popular legislation were considerable. The Federal government continued its new policy of taking the census of the aboriginal population relative to the "Indian Bill of Rights" (see *NEW INTERNATIONAL YEAR BOOK* for 1934, p. 616). Zuni, N. M., the largest, if not the oldest, Amerind *pueblo* in the United States, approved the bill by an overwhelming vote and on January 12, its first popularly chosen governor, lieutenant governor, and councilmen were installed—the first named receiving the insignia of authority in the form of a cane presented by President Lincoln in 1865 and thence handed down.

All five Iroquois reservations in New York State, the Alleghenies, Tonawandas, Tuscaroras, and Cattaraugus Senecas, decisively rejected the act—the last named by a vote of 475 to 101—because of alleged fear that it would invite white interference. A majority of the enrolled St. Regis Mohawks failed to register a preference and were counted as favorable, although the vote actually cast was adverse. The Flatheads of Montana ratified the act and availed themselves of their privilege to incorporate and adopt a constitution. The latter was formally presented to the hereditary chiefs of the tribe by the U.S. Secretary of the Interior Harold L. Ickes in Washington and is the first of its kind.

Referenda were also taken among the nation's

farmers. On May 25 they voted on the question of continuing wheat control and, according to the official returns, the vote in favor was 379,840 with 61,133 against. On October 26, a vote was taken on the "corn-hog adjustment programme," which resulted in 556,815 being recorded in favor of continuing and 90,227 against. See *Agriculture under Agricultural Adjustment*.

Alabama. On February 26, the proposed repeal of prohibition was defeated by a majority of about 5000 in spite of a contrary majority of over 22,000 in the three large industrial counties. Of the 67 counties, however, 49 voted against repeal.

Arizona. The vote on the "corn-hog programme" was 51 in favor and 40 against.

Arkansas. For the "corn-hog programme" there were 4570; against, 602. Two western townships voted "dry" by large majorities.

California. For the "corn-hog programme" there were 1774; against, 196. In Sacramento, bond issues aggregating \$591,000 were approved; others to the extent of \$374,000 were rejected. In Beverly Hills, \$400,000 were voted for schools.

Colorado. For the "corn-hog programme" there were 1150; against, 145.

Connecticut. For the "corn-hog programme" there were 26; against, 2.

Delaware. For the "corn-hog programme," 757; against, 166.

District of Columbia. In view of last year's decision (*NEW INTERNATIONAL YEAR BOOK* for 1934, p. 616) that the District Commissioners had no power to take an "advisory referendum," one of them prepared a bill, for presentation to Congress, to confer such power.

Georgia. On May 15 the proposal to repeal the prohibition law was defeated by a vote of, approximately, 82,120 as against 81,893. A separate proposal to authorize beer sales received 85,402 as against 76,514; another, authorizing wine sales, received 83,847 against 75,245. For the "corn-hog programme," there were 321 votes; against, 16.

Idaho. For the "corn-hog programme," there were 1593 votes; against, 167.

Illinois. The "corn-hog programme" received 54,376 votes; against, 7448.

Indiana. In *re Todd*, (Ind.) 193 N.E. 865, upholds, as part of the State constitution, a proposal which on November, 1932, received 439,949 votes as against 236,613; although votes for candidates at the same election aggregated 1,576,897 and article 16 of the constitution required "a majority of the electors" to ratify an amendment. Overruling three previous decisions, the Indiana Supreme Court construed that requirement as meaning a majority of those voting on the proposal. While there was a vigorous dissenting opinion by Chief Justice Fansler, and while the decision was criticized by the Dean of the John Marshall Law School, the friends of popular legislation regarded it as a victory for their cause since it insured an expression from those electors who were actually interested in a proposed measure, and obviated inaction because of the indifferent voter.

Iowa. For "corn-hog programme," 153,343; against, 24,681.

Kansas. For "corn-hog programme," 30,742; against, 5559.

Kentucky. On November 5 two amendments of a constitution which had not been changed for 15 years were adopted. One provided for old age pensions and it was adopted by almost a 10 to 1 vote; the other repealed the prohibition amendment and was ratified by a smaller majority.

Maryland. The vote for the "corn-hog programme," was 1559; against, 149. The legislature enacted laws authorizing local referenda and Colman Manor submitted proposals for a fire protection tax and for street improvement bonds up to 8 per cent of the town's assessed value.

Michigan. For the "corn-hog programme," there were 2586 votes; opposed, 88.

Minnesota. For the "corn-hog programme," 33,387; against, 4446.

Mississippi. On December 2, the city of Oxford, which owns a light and power plant, voted 290 to 237 against entering into a TVA contract. Two counties of the State voted to prohibit the sale of beer.

Missouri. The vote for the "corn-hog programme" was 33,718; against, 4731.

Montana. The vote for the "corn-hog programme" was 1408; against, 78.

Nebraska. The vote for the "corn-hog programme" was 52,719; against, 6984. A proposed bond issue of \$775,000 for schools was rejected in Lincoln. Citizens of Creighton voted in favor of liquor sales by the drink.

Nevada. The vote for the "corn-hog programme" was 216; against, 21.

New Jersey. The vote for the "corn-hog programme" was 176; against, 13. The act of 1933 providing for municipal referenda on Sunday amusements, was availed of by several municipalities. On November 5 the Camden electors voted, under the act of 1917, in favor (22,009 to 4389) of a municipal power plant. A previous vote to the same effect was set aside by the State Supreme Court in *Public Service, etc. Co. v. Camden*, (N. J.) 180 Atl. 778, on the ground that the petition therefor failed to contain 20 per cent of the registered electorate as required by the statute.

New Mexico. The vote for the "corn-hog programme" was 180; against, 24. On September 17, the electors voted on five proposed amendments to the State constitution. One of these exempted from taxation homesteads up to \$2500 in valuation.

New York. The proposal to authorize initiation of constitutional amendments by 10 per cent of the number voting on the governorship at the preceding election, was approved by the State senate on April 4 but failed to pass in the assembly. On April 23, Governor Lehman signed a bill authorizing municipal referenda on Sunday theatres. On June 11, Beacon, by a vote of 1273 to 4888, and for the second time, rejected the city manager plan. Four notable proposals were approved by the voters on November 5: (1) Directing the legislature to provide alternative forms of local government at the option of the counties, and authorizing the New York City municipal assembly to abolish unnecessary county offices. Under this, Monroe County, containing Rochester, has already adopted the county manager plan by a vote of 45,513 to 28,863; (2) Authorizing verdicts by five-sixths of the jury in civil cases (See the article on LAW under *Juries*); (3) Repealing the double liability for bank stockholders; (4) A \$55,000,000 bond issue for unemployment relief. The Albany project for a municipal power plant was adopted on November 5 by 22,272 to 8930; a similar proposal in Lockport was rejected by about 1000.

North Carolina. The city manager plan was defeated in Raleigh on March 12 by less than 300 votes and the result was ascribed to the wholesale manipulation of Negroes by white politicians. At

the ensuing municipal primary on April 22, Negro leaders, including the Rev. George Fisher, challenged hundreds of these exploited Negroes and prevented them from voting.

North Dakota. The vote for the "corn-hog programme" was 26,399; against, 4722. A referendum on the sales tax law, July 15, resulted in its approval by a vote of 75,166 to 65,890.

Ohio. In *State ex rel. Singer v. Cartledge*, 129 O.St. 279, a majority of the court upheld the Steubenville city council in raising municipal salaries which had been fixed by a popular vote. On May 28 the proposed repeal of Toledo's city manager charter, adopted in 1934, was defeated by a vote of 27,478 to 18,488. Nine proposed bond issues were defeated there on November 5, as was a majority of similar proposed issues elsewhere in the State though they were to have been supplemented by Federal grants. But of proposed increased levies in school districts and other local subdivisions, the trend was toward approval. In Carrollton, home of F. Scott McBride, Anti-Saloon League leader, the vote was in favor of prohibiting hard liquor sale but permitting that of 3.2 per cent beer. Vote on the "corn-hog programme" was 26,426; against, 4669.

Oklahoma. Vote for the "corn-hog programme" was 20,319; against, 3277.

Oregon. Vote for the "corn-hog programme" was 1652; against, 239.

Pennsylvania. On September 17, the proposal for a convention to revise the State constitution was rejected by a majority approximating 250,000. Vote for the "corn-hog programme" was 1231; against, 265. At the general election of November 5, some 5,000,000 voters, in 276 municipalities, participated in plebiscites on the licensing of Sunday amusements. The larger cities generally voted in favor—Philadelphia by about 5 to 2; but many others, including Harrisburg and Gettysburg, were opposed. On the liquor question, more than 116 municipalities voted to prohibit the sale of beer as against 107 in favor; 106 voted against hard liquor to 70 in favor.

Philippines. The Commonwealth Constitution, approved by the convention on February 8, was ratified by the electors on May 14, the vote being 1,213,046 in favor and 44,963 against. Under article 14 amendments must be "submitted to the people for their ratification" and "approved by a majority of the votes"; but no provision appears to be made for a new convention.

Rhode Island. Votes for the "corn-hog programme" were 12; against, 5.

Tennessee. On March 12, the proposed \$8,000,000 municipal power bond issue was approved by a decisive majority of the Chattanooga voters. A resolution for a referendum on repeal of the State prohibition law was adopted by the lower legislative branch, but failed in the senate. Votes for the "corn-hog programme" were 10,287; against, 1074.

Texas. Seven proposed amendments to the State constitution were submitted at a special election, August 24, with results as follows: (1) For old age pensions, 444,539; against, 108,565. (2) For abolishing jury trials in temporary commitment of mentally ill, 294,287; against, 199,959. (3) For state dispensary to sell intoxicants, 297,597; against, 250,948. (4) For authorizing submission of proposals at special legislative sessions, 214,024; against, 238,258. (5) For authorizing probation on suspended sentences, 245,285; against, 216,549. (6) For abolishing official fee system in

certain counties, 274,537; against, 188,672. (7) For furnishing free text books to all school pupils, 257,-815; against, 280,019.

Utah. Votes for the "corn-hog programme" were 799; against, 57.

Virginia. Votes for the "corn-hog programme" were 5342; against, 360.

Washington. Votes for the "corn-hog programme" were 1316; against, 69.

West Virginia. Votes for the "corn-hog programme" were 69; against, 10.

Wisconsin. Votes for the "corn-hog programme" were 4989; against, 452.

Wyoming. Votes for the "corn-hog programme" were 902; against 86.

See the articles on the above-mentioned States for further details.

FOREIGN

Germany. From the international standpoint the most important plebiscite of the year 1935 was that to determine the sovereignty of the Saar Valley which took place as scheduled on January 13. Sarah Wambaugh, a disinterested observer, pronounced the proceedings "orderly and carefully planned" by the Commission of the League of Nations, whose prestige was correspondingly enhanced. Safeguards in the form of neutral military contingents and inspectors, insured not only a secret, but a full and untrammelled vote. According to the Commission's Secretary, 98 per cent of the electors participated and the overwhelming majority for Germany (477,119 against 45,513 for the status quo and only 2124 for France) was everywhere accepted as the spontaneous expression of the popular will. Probably no question of European sovereignty was ever more completely so settled. See SAAR under *History*

Greece. On Nov 3, 1935, the long promised plebiscite was taken on the question of restoring the monarchy, but there were not the same safeguards as in the Saar and the proportion of eligibles who voted was far less. Indeed the Greek republicans appear generally to have abstained from voting and the nominally large majorities for restoration lack real significance. The whole situation strongly recalls the Napoleonic plebiscites of the early 19th century. See GREECE under *History*

Switzerland. On February 24, a referendum, initiated by Socialists and Communists, was taken on an act of the Swiss Parliament lengthening the term of compulsory military service. Due to an intensive campaign throughout the country, 80 per cent of the electorate participated and the total vote was 506,845 for the law and 431,902 against. In the Geneva canton, 19,742 voted for and 14,521 against. An even larger proportion (83 per cent) participated, on June 2, in a referendum on the proposed recovery plan, which had some of the features of the "New Deal" of the United States but also, its opponents charged, involved retention of the gold standard. The proposal was rejected by a vote of 566,242 to 424,878. Indeed only 4 of the 22 cantons voted in favor—they were the important ones of Basel, Berne, Schaffhausen, and Soleur. The attempted initiation of a law, to suppress Masonic (See FREEMASONRY) and other secret societies, failed for lack of sufficient genuine signatures to the petitions—15 per cent or more were found to be fraudulent.

Bibliography. Wambaugh, *Post World War Plebiscites* (1933); Lobingier, *The People's Law* (1909).

REFORMED CHURCH IN AMERICA.

Composed originally of settlers from the Netherlands, and known until 1867 as the Reformed Protestant Dutch Church in North America, the denomination has since become largely intermixed with elements from many other nationalities. Its doctrinal standards are the Belgic Confession, the Heidelberg Catechism, and the Canons of the Synod of Dort. The form of government is of the Presbyterian type.

In 1935 the denomination reported 726 churches, 866 ministers, 87,771 families, and 160,065 communicants. In the foreign mission field, which included China, India, Japan, Arabia, and Iraq, there were employed 146 missionaries. Two ordained ministers and four other workers were employed in the mission in the State of Chiapas, Mexico. There were also 200 domestic missionaries who served as pastors of mission churches and as teachers and other workers among the Indians of Nebraska, Oklahoma, and New Mexico, the mountaineers of Kentucky, and the Negroes of Alabama. Contributions reported in 1935 amounted to \$2,814,040 for congregational expenses, \$521,550 for denominational benevolence, and \$94,048 for other benevolences.

The church colleges are Hope, at Holland, Mich.; Central, at Pella, Iowa; and Northwestern Junior, at Orange City, Iowa, while theological seminaries are maintained at New Brunswick, N. J., and Holland, Mich. The official paper is the *Intelligencer Leader*, published at Holland, Mich. At the session of the general synod in 1934, the Rev John Wesselink, D.D., of St. Anne, Ill., was elected president. The usual annual session was omitted in 1935, so that Dr. Wesselink continued in office until 1936. The Rev John A. Ingham, D.D., is stated clerk of the general synod. Headquarters of the denomination are at 25 East Twenty-second Street, New York City.

REFORMED EPISCOPAL CHURCH.

A denomination formed in 1873 by Bishop George David Cummins, D.D., and associated clergymen and laymen who had withdrawn from the Protestant Episcopal Church. It is liturgical and evangelical and possesses the historic episcopate. The two synods are New York and Philadelphia, comprising churches from New York to Virginia, and Chicago (Bishop Frank V. C. Cleak, D.D., in jurisdiction), comprising those in Illinois and Ohio. At the twenty-seventh triennial session of the general council, held in Germantown, Pa., May 17, 1933, there were reported 68 parishes, served by 3 bishops and 63 other ministers, with 8470 communicants.

The Church's paper, the *Episcopal Recorder*, has been published continuously in Philadelphia for 113 years. Its theological seminary, 25 South 43d St., Philadelphia, was founded in 1886. The foreign mission field is the Lalitpur district in India, with more than 200,000 inhabitants. To the evangelistic department and the orphanage, a medical department, with hospital, was added in 1933. The home mission field, under the care of Bishop Joseph E. Kearney, D.D., consists of 36 parishes and missions among the Negroes of South Carolina. The presiding bishop and president of the general council is Bishop Robert Westly Peach, D.D.; the general secretary is the Rev. Howard D. Higgins, Th.M., and headquarters are at the seminary. The office of the mission boards is 1016 Girard Trust Building, Philadelphia.

REINDEER HUSBANDRY. See ALASKA.

RELIEF. See CHILD WELFARE; UNITED STATES under *Congress*.

RENSSELAER POLYTECHNIC INSTITUTE. A nonsectarian institution for the technical training of men in Troy, N. Y., founded in 1824. In 1935 there were 1244 students enrolled. The teaching staff numbered 130. The productive funds amounted to \$5,090,600 as general endowment; the total income was \$775,800. As gifts for endowment \$37,651 was received. The library contained 27,086 volumes and 25,281 pamphlets. The Ricketts Building for Chemical, Metallurgical, and Aeronautical Engineering was completed during 1935 at a cost of \$450,000, and the Walker Chemical Laboratory remodeled. President, William O. Hotchkiss, C.E., Ph.D.

REPARATIONS AND WAR DEBTS.

There was no change during 1935 in the status of the reparations and war debt problem as it existed in 1934 (see 1934 YEAR BOOK, p. 620). In accordance with the Lausanne agreement of July 2, 1932 (see 1932 YEAR BOOK, p. 722-723) the Hoover moratorium on German and non-German reparations and on the war debts which the various European governments owed one another was continued pending a "satisfactory settlement" of their war debt controversies with the United States.

The United States Congress and Government showed no willingness to grant the drastic reductions and adjustments in the debt funding agreements demanded by the debtor governments. As had become customary since the debtors commenced to default on their installments in 1932, the State Department at Washington in 1935 sent semi-annual notices to the respective governments stating the amount of the installments due on June 15 and December 15 and demanding payment. The notes reiterated that the American Government was ready to "discuss through diplomatic channels" any proposals which the Governments might desire to put forward in regard to the payment of their indebtedness.

With the exception of Finland, which again paid both installments in full, all of the debtor governments defaulted. The replies of the defaulting States asserted that they were unable to submit any proposals. The notes reiterated the debtor States' contention that the suspension of German reparation payments, the continuance of the world economic depression, and the high tariff policy of the United States all combined to render the resumption of war debt payments impossible. Table I shows the war debt installments due the United States from foreign countries on June 15 and Dec. 15, 1935, and the total amount in default on Dec. 15, 1935:

TABLE I—WAR DEBT INSTALLMENTS DUE U.S.

Country	Installment due June 15	Installment due Dec 15	Amount in default, Dec 15
Belgium	\$ 7,409,454	\$ 4,642,454	\$ 33,630,269
Czechoslovakia ..	1,682,813	1,682,813	9,584,150
Estonia	322,850	444,850	2,611,886
Finland	165,453	230,453	.....
France	64,367,138	22,308,312	250,292,293
Great Britain ..	85,670,765	117,670,765	582,803,307
Hungary	37,411	50,721	290,381*
Italy	15,141,593	2,141,593	47,853,384
Latvia	134,883	185,083	961,995
Lithuania	164,352	121,467	776,320
Poland	4,019,040	5,524,040	32,535,989
Rumania	1,448,750	48,750	3,843,750
Yugoslavia	325,000	.....	1,150,000
Total	180,909,502	155,051,301	966,828,584

* The Hungarian Government also deposited with the foreign creditors' account at the Hungarian National Bank Hungarian Treasury certificates totaling 994,995 pengos as of June 15, 1935, plus the pengo equivalent of the amount due on Dec. 15, 1935.

In addition to the amount of war debt payments in default, shown in Table I, the Greek Government was in default in the sum of \$4,426,508 as of Jan. 1, 1936, under the funding agreement of May 10, 1929. The German Government on Jan. 10, 1936, was in arrears to the amount of \$7,226,611 on interest payments. The total funded German debt to the United States for army costs and mixed claims amounted to \$1,278,340,010. Up to Jan. 10, 1936, payments of principal and interest aggregating \$33,587,810 had been received on this debt and \$1,232,250,361 was outstanding. The Austrian Government was in default in the sum of \$146,213 on Jan. 10, 1936. Table II shows the total indebtedness of foreign governments to the United States on Jan. 10, 1936, excluding Germany.

TABLE II—TOTAL INDEBTEDNESS OF FOREIGN GOVERNMENTS TO THE U.S.—JAN 10, 1936

Country	Total indebtedness	Principal unpaid ^a	Interest accrued and unpaid under funding and moratorium agreements
Funded debts:			
Austria	\$ 23,898,430	\$ 23,752,217	\$ 146,213
Belgium	423,479,692	400,680,000	19,049,692
Czechoslovakia ..	165,483,257	165,241,109	242,148
Estonia	18,969,793	16,466,013	2,011,420
Finland	8,544,350	8,344,682	.....
France	4,041,152,329	3,863,650,000	138,865,829
Great Britain ..	4,950,595,301	4,368,000,000	451,075,301
Greece	33,281,866	31,516,000	1,316,786
Hungary	2,189,303	1,908,560	223,670
Italy	2,014,065,749	2,004,900,000	6,659,624
Latvia	7,807,810	6,879,461	722,356
Lithuania	6,985,256	6,197,682	601,643
Poland	237,390,983	206,057,000	25,172,148
Rumania	63,925,133	63,860,560	64,573
Yugoslavia ^b ..	61,625,000	61,625,000	.....
Total	12,059,394,251	11,229,078,287	616,151,402
Unfunded debts:			
Armenia	21,509,408	11,959,917	9,549,491
Nicaragua	451,386	289,899	161,487
Russia	356,481,985	192,601,297	163,880,688
Total	378,442,780	204,851,114	173,591,666
Grand total ..	12,437,837,030	11,433,929,401	819,743,068

^a Includes principal postponed under moratorium agreements and principal amounts not paid according to contract terms. ^b Yugoslavia has not accepted the provisions of the moratorium.

Table III shows the distribution of German reparation payments, by countries, from Sept. 1, 1924, to Mar. 31, 1935. In addition to the total of

TABLE III—DISTRIBUTION AMONG CREDITOR GOVERNMENTS OF PAYMENTS MADE BY GERMANY UNDER DAWES AND YOUNG PLANS FROM SEPT. 1, 1924, TO MAR. 31, 1935*

Creditor Governments receiving payments	Dawes Plan Sept 1, 1924, to May 17, 1930 (German marks)	Young Plan Sept. 1, 1929, to Mar 31, 1935 (German marks)	Distributed by Dawes and Young Plans, Sept 1, 1924, to Mar 31, 1935 (German marks)
France	3,930,182,589	1,429,869,427	5,369,052,016
Great Britain ..	1,654,410,293	465,964,081	2,120,374,374
Italy	555,130,021	232,005,684	787,135,706
Belgium	527,499,269	194,411,910	721,911,179
Yugoslavia	275,160,196	165,101,165	440,261,361
United States ..	300,430,668	76,950,000	377,380,668
Rumania	67,243,820	12,660,000	79,903,820
Japan	45,077,712	25,619,382	70,697,093
Portugal	44,894,702	22,082,129	66,976,831
Greece	23,734,396	5,405,920	29,140,316
Poland	1,417,490	1,124,458	2,541,949
Total	7,434,181,156	2,611,194,155	10,065,375,311

* Not including any payments received by the creditor governments prior to the inception of the Dawes Plan, or any of the amounts realized by creditor governments from sources outside the Dawes and Young Plans

10,065,375,311 marks distributed direct to the creditor governments, Germany paid out under the Dawes and Young Plans the following sums: Service on German External Loan of 1924, 803,994,571 marks; service on German Government International 5½ per cent loan of 1930, 239,990,366 marks; expenses, etc., 113,490,755 marks; re-loaned to German Railway Co. on behalf of the creditor governments, 540,335,002 marks; re-loaned to German Government from Yugoslavia's share in the nonpostponable part of the 1931-32 annuity, 5,379,294 marks; and the undistributed balance in the Bank for International Settlements on Mar. 31, 1935, of 125,633,982 marks. These payments, added to the sums paid direct to the creditor governments, brought the total German reparation payments under the Dawes and Young Plans up to Mar. 31, 1935, to 11,894,199,381 marks.

REPEAL DEBATE. THE. See PROHIBITION.
REPTILES. See ZOOLOGY.

RÉUNION. rä'u'nyōn. A French island colony 420 miles east of Madagascar. Area, 970 sq. miles; population (1931), 197,933 including 194,272 French, 2242 Chinese, 302 Africans, 921 natives of Madagascar, and 196 British Indians. Chief towns: St Denis, the capital (26,807 inhabitants), St. Pierre (22,048), St Paul (22,679), St. Louis (17,237). The chief port was Pointe-des-Galets.

Sugar, rum, manioc, coffee, tapioca, vanilla, and spices were the main products. In 1933, imports (mainly rice, grain, cotton goods) were valued at 146,000,000 francs; exports, 117,000,000 francs of which sugar (56,000 metric tons) accounted for 84,000,000 francs and spirits (46,566 hectoliters), 19,000,000 francs (franc averaged \$0.0501 for 1933). The budget for 1933 was balanced at 63,634,000 francs. Administration was under a governor assisted by a privy council, and an elective council-general. Réunion was represented in the French Parliament by a senator and two deputies.

RHODE ISLAND. Population. On Apr. 1, 1930 (Fifteenth Census), 687,497; July 1, 1934 (latest Federal estimate), 705,000; 1920 (Census), 604,397. Providence, the capital, had (1930) 252,981 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934

Crop	Year	Acreage	Prod Bu	Value
Hay (tame)	1935	43,000	54,000 *	\$ 832,000
	1934	42,000	51,000 *	1,071,000
Potatoes	1935	4,200	735,000	514,000
	1934	4,000	720,000	446,000
Corn	1935	9,000	369,000	295,000
	1934	8,000	328,000	305,000

* Tons

Education. Inhabitants of school age (from 4 to 21 years) were reported as numbering 208,682 in January, 1935. For the academic year ended on June 30, 1935, the number of students in public schools was 124,346; those in private and in parochial schools totaled 33,371. Of the pupils in public schools, 5049 were in pre-elementary classes; in elementary grades, 48,486; in junior high schools, 22,491; in senior high schools, 14,479; in primary schools, 12,896; in grammar schools, 12,178; in mixed schools, 1344; in four-year high schools, 5189, in special schools, 1523; and in vocational schools, 711. The year's current expenditures for public-school education totaled \$9,480,652. Salaries of teachers averaged \$1594.78.

Charities and Corrections. The Department of Public Welfare, under the administrative organ-

ization in effect in 1935, exercised the State's chief central functions in relation to institutions for the care and custody of persons. It operated 11 institutions supported by the State; these contained some 5755 inmates. It also maintained dependent children in private homes at the cost of the State. Its yearly budget somewhat exceeded \$2,500,000.

The State institutions thus operated and their respective totals of inmates on June 30, 1935, were: State Hospital for Mental Diseases, 2370; State Infirmary, 988; Exeter School (mental defectives), 614; State Prison, 541; Men's Reformatory, 160; Women's Reformatory, 32; Sockanosset School (delinquent boys), 221, Oaklawn School (delinquent girls), 39; State Home and School (neglected and dependent), 323; State Sanatorium (for tuberculosis), 385; Soldiers' Home, 82.

Legislation. The regular session of the General Assembly, convening on January 1, proceeded immediately to rid the State of its chief remaining Republican officers. It vacated all five seats on the bench of the State Supreme Court; this it did by authority of a statute already existing, which a Republican Legislature had enacted 35 years before, rendering any member of that Court removable without stated cause, by the simple vote of majorities in both houses of the Assembly. The Court was rendered bipartisan (3 Democrats, 2 Republicans). On the same day an act was passed abolishing the Board of Public Safety that a Republican Legislature had created to control the police and fire forces of the Democratic city of Providence; also was enacted a bill consolidating more than 80 separate branches of the State Government into 11 departments. Later the Legislature altered a system of appointment to offices which was regarded as having given the State Senate a virtual appointing power. The flock of anti-Republican measures was regarded by Democrats as merely nullifying advantages that Republicans had dealt to themselves before the overturn of 1934.

At the outset of the session the Republicans seemed to have a slight Senate majority; but two Republicans who claimed election to the Senate were voted out on a recount; thus Democratic control was assured.

A system of pensions, payable by the State to persons 65 years old or more who had not more than \$3000 of property, was created, to go into effect on July 1; an appropriation of \$200,000 was made toward covering its operation during 1935. For the rate of the pensions a maximum of \$30 a month was set.

A special session held in May passed the yearly appropriation bill and enacted a reorganization bill designed to set in order the details of the administrative consolidations effected by the regular session.

Political and Other Events. A special election was held on August 6 to elect a United States Representative to fill a vacancy in the First District and to decide by referendum of the whole State whether the State should borrow \$8,000,000 from the Federal Government for projects of construction to the cost of which the Government would donate 45 per cent outright. In the First District Charles F. Risk, Republican, was elected Representative by a vote of 48,023 to 35,054 (unofficial), over Antonio Prince, Democrat. The Federal loan and bounty for public works were rejected; and an issue of \$3,000,000 in State bonds, for contribution to the support of the destitute unemployed by a direct dole, was adopted.

This election was taken as a sign of the decline of

the popularity of the "New Deal" in the Nation. Its significance, as to the First District, lay in the fact that this constituency had elected a Democratic Representative less than a year before by 70,518 votes to 49,087. However, the National aspect of the August election was qualified by some reaction against recent Democratic measures of State partisanship and by the dissatisfaction common in the textile areas, throughout New England, with the processing taxes, which were on the contrary popular in the agricultural South and West.

Officers. The chief officers of the State, serving in 1935, were: Governor, Theodore Francis Green; Lieutenant-Governor, Robert E. Quinn; Secretary of State, Louis W. Cappelli; Attorney-General, John P. Hartigan; General Treasurer, Antonio Prince; Budget Director and Comptroller, Christopher Del Sarto.

Judiciary. Supreme Court: Chief Justice, Edmund W. Flynn; Associate Justices, William W. Moss, Francis B. Condon, Hugh B. Baker, Antonio A. Capotosto. Superior Court: Presiding Justice, Jeremiah E. O'Connell.

RHODES. See *ÆGEAN ISLANDS, ITALIAN.*

RHODESIA, NORTHERN. A British protectorate in Africa. Area, 290,320 sq. miles; population (1934), 1,378,077 of whom 1,366,425 were Africans and 11,464 were Europeans. Chief towns: Lusaka (capital); Livingstone; Broken Hill; Fort Jameson, Mazabuka.

Production and Trade. Maize, wheat, tobacco, coffee, oil seeds, and citrus were the main agricultural crops. Livestock raising was carried on by many of the farmers. Mineral production (1934) was valued at £4,776,134 of which copper (137,897 tons) represented £4,165,932; cobalt (571 4 tons), £320,000; zinc (19,540 tons), £265,698; gold (2113 oz.), £14,511. During 1934, imports were valued at £2,957,117 exclusive of government stores (£42,204) and specie (£4416); exports were valued at £4,530,933 exclusive of specie (£9462).

Government. For the year 1934, revenue amounted to £693,337; expenditure, £712,903; public debt, £2,347,000. Government was vested in a governor aided by an executive council of 5 members, and a legislative council of 16 members. Governor in 1935, Sir H. W. Young.

History. During May, 1935, 11,000 natives employed in the copper mines engaged in serious rioting in protest against the introduction of a higher poll tax. At Luanshya the natives wrecked the mine compound offices but they were stopped in their attempt on the power house when six of their number were killed by troops. Order was restored by the end of May.

The new capital at Lusaka was officially inaugurated, on May 28, 1935, by Gov. Sir Hubert Young. It was announced during October, 1935, that an agreement had been ratified for the erection of a hydro-electric station at Victoria Falls to supply electricity in bulk to the town of Livingstone.

RHODESIA, SOUTHERN. A British Dominion in South Africa. Area, 150,344 sq. miles; population (June, 1934), 1,212,000 including 52,950 Europeans, 1,154,000 natives, and 4550 others. Chief towns: Salisbury, the capital (29,000 inhabitants in 1934), Bulawayo (33,000), Umtali, Gwelo, Gatooma, Que Que, Shamva, Wankie, Victoria.

Production and Trade. Maize, cotton, tobacco, groundnuts, legumes, oranges, and lemons were the main agricultural products. Dairying was an important industry. Livestock (1933): 2,688,677 cattle, 323,940 sheep, 79,176 swine. Mineral output (1934): gold (21,550 kg.), silver (3993 kg.),

chrome ore (72,100 met. tons), coal (643,000 met. tons), asbestos (29,200 met. tons). In 1934 (provisional figures), imports amounted to £5,562,000 including bullion and specie (£340,000); exports, £8,779,000 including bullion and specie (£5,110,000).

Government. For the year ended Mar. 31, 1934, revenue amounted to £2,465,380; expenditure (including loan expenditure, £354,034), £2,858,442; public debt, £8,969,315. Budget estimates (1934-35): revenue, £2,501,000; expenditure out of revenue, £2,522,686. Government was vested in a governor assisted by an executive council, and a legislative council. Governor and Commander-in-Chief, Sir H. J. Stanley; Prime Minister, G. M. Huggins.

RICE. Data on the world's rice production generally are incomplete and not closely up to date. Towards the close of the calendar year 1935 only nine countries had reported estimates of production for the crop-year 1935-36 to the International Institute of Agriculture. Of these the leading countries and their yields were as follows: Japan 518,815,000 bu., Chosen 161,992,000 bu., Taiwan (first annual crop) 39,354,000 bu., and Italy 32,209,000 bu. of rough rice of 45 lb. per bu. Statistics published in the *Yearbook* of the U.S. Department of Agriculture for 1935 place the world's estimated total production of cleaned rice for the year 1933-34 exclusive of China, at 134,000,000,000 lb. The Chinese crop of cleaned rice in 1934 was estimated at 77,280,000,000 lb., and the Indian crop at 67,991,000,000 lb. Indo-China and Java and Madura together produce each about 8,000,000,000 lb., Siam about 6,000,000,000 lb., and the Philippines about 3,000,000,000 lb. of cleaned rice annually.

The 1935 rice crop of the United States was estimated by the Department of Agriculture at 38,296,000 bu. which was slightly above the preceding crop but below the average of 43,017,000 bu. for the five years 1928-32. Arkansas, Louisiana, and Texas produced 31,778,000 bu., compared with 30,631,000 bu. in 1934 while California harvested 6,664,000 bu. in comparison with 7,665,000 bu. the year before. The average yield per acre in 1935 and 1934 was 49 bu. compared with average of 43.3 bu. for the 10 years 1923-32. The rice acreage in 1935 was 784,000 acres, 3000 acres above the area in 1934 and the smallest since 1914. The average farm price for the uncompleted 1935 marketing season was 62.4 cents and for the marketing season of 1934 79.2 cents. At these prices the total value of the 1935 rice crop was \$24,011,000 and of the 1934 crop \$30,332,000. The individual yields of the three rice producing States other than California for the year were reported as follows: Louisiana 16,808,000 bu., Texas 8,632,000 bu., and Arkansas 6,348,000 bu.

The United States during the fiscal year ended June 30, 1935, exported 122,425,000 lb. of rough and milled rice and 279,000 lb. of rice flour and other rice products and imported 5,551,000 lb. of uncleaned rice, 24,382,000 lb. of cleaned rice, not including patna, 1,832,000 lb. of patna, and 36,725,000 lb. of rice meal, rice flour, and broken rice.

RICE, EDWIN WILBUR, JR. An American electrical engineer and utility corporation official, died at Schenectady, N. Y., Nov. 25, 1935. Born in Lacrosse, Wis., May 6, 1862, he graduated from the Central High School, Philadelphia in 1880. His ingenuity and mechanical ability brought him to the attention of Elihu Thomson, the professor of chemistry at the school, who invited him to join

him as assistant in the foundation of the American Electric Co., at New Britain, Conn. In 1883, its name was changed to the Thomson-Houston Electrical Company, and young Rice was made superintendent. During the period of their association, Rice and Professor Thomson collaborated on many inventions, principally on the Thomson-Rice arc lamp (1884). An able executive as well as an inventor, Rice so systematized the work of the plant that expenses were reduced and production increased.

In 1892 the Company merged with the Edison General Electric Company under the name of the General Electric Company, and two years later Rice was made vice president, serving until 1913 when he was made president. He retired in 1922 and the position of honorary chairman of the board was created for him. The rise of the General Electric Company to the position it now holds in the industrial field may well be attributed to the ability and efforts of Edwin Rice, for by his broad views of the needs of the electrical industry, the Company's research laboratories were established in 1900, and proved an indispensable asset to industrial and scientific progress.

Mr. Rice was a fellow of the American Institute of Electrical Engineers, and was its president in 1917. In 1910 he was made a Chevalier of the Legion of Honor, and later was decorated with the Order of the Rising Sun, 3d Class with Cordon, by the Japanese Government. In 1931 the Edison Medal of the American Institute of Electrical Engineers was conferred upon him for "his contribution to the development of the electrical systems and his encouragement of scientific research in industry." Mr. Rice held over 100 patents, and for 25 years was a trustee of Union College.

RICE INSTITUTE. A coeducational institution for higher education in Houston, Texas, opened in 1912. The enrollment in the autumn of 1935 was 1314, and the faculty numbered 85. The plant equipment and productive funds of the institution were estimated at \$15,000,000, and the income from endowment for the fiscal year 1934-35 was in excess of \$600,000. The library contained approximately 122,150 volumes. President, Edgar Odell Lovett, Ph.D., Sc.D., LL.D.

RICHET, ré'shâ', CHARLES. A French physiologist, the son of Alfred Richet, died in Paris, Dec. 3, 1935, where he was born, Aug. 26, 1850. He was educated at Lycée Bonaparte and in 1869 began the study of medicine, becoming an interne in 1872, and receiving his medical degree at the School of Medicine in 1876. Three years later he received a prize from the Institute of France for his monograph, *Propriétés chimiques et physiologiques du suc gastrique*, and after 1881 he became a member of the French Biological Society. He succeeded Béclard as professor of physiology in the medical faculty of the University of Paris in 1887, and in 1889 was elected a member of the Academy of Medicine.

Dr. Richet is known especially for his work in serotherapy, the treatment of disease by injecting into the veins serum from immunized animals, and anaphylaxis, increased susceptibility to a toxic or remedial agent after a primary dose has been received into the blood. For his researches in connection with the last-named, he received the Nobel Prize for medicine in 1913.

Becoming interested in vivisection, he discovered in 1894 an anæsthetic that was a combination of chloral and glucose, which although a pain-killer, was preservative of the reflex motions necessary

to vivisection studies. His interest was held also by psychical research and in 1905 he served as president of the Society of Psychical Research in London. As late as 1922 he wrote what was virtually a textbook upon the subject, *Traité de Métapsychique*, which, in the following year, was translated into English as *Thirty Years of Psychical Research*. A smaller volume, *Our Sixth Sense*, based on this work, appeared in English in 1929. Ever a peace advocate, the Doctor published *Les Guerres et la paix* (1901) and *Le Passé de la Guerre et l'avenir de la paix* (1907), and subsequently became president of the Société pour l'Arbitrage entre nations. He served in the World War.

Besides translating into French Harvey's *Circulation of the Blood* (1879), Richet published many interesting works, including: *Les Poisons de l'intelligence* (1877); *Recherches expérimentales et cliniques sur la sensibilité* (1877); *Structure des circonvolutions cérébrales* (1878); *Du Sac gastrique chez l'homme et les animaux* (1878); *Physiologie des muscles et des nerfs* (1882); *L'Homme et l'intelligence* (1884); *Essai de psychologie générale* (1887); *La Physiologie et la Médecine* (1888); *La chaleur animale* (1889); *Physiologie, travaux du laboratoire* (3 vols., 1892-95); *Dictionnaire de physiologie*, with others (1895-1906); *L'Anaphylaxie* (1911; Eng. trans 1913); *War Nursing* (Eng. trans., 1918); *L'Homme Stupide* (1919); *Traité de Physiologie Médico-chirurgicale*, with Charles Richet, jr. (1921); *L'œuvre de Pasteur* (1923); *L'Homme impuissant* (1926; Eng. trans., 1928); *Histoire naturelle d'un savant* (also in English, 1927); *L'Intelligence et l'Homme* (1927). In 1875 he issued *Poésies* under the pseudonym of "Charles Epheyre." Also, he wrote several works of fiction, chief among which were *Possession* (1890) and *Sœur Marthe* (1892), which were dramatized in 1891 and 1893 respectively.

Dr. Richet was a Commander of the Legion of Honor, and in 1932 was elected president of the French Academy of Sciences.

RICKETT CONCESSION. See ETHIOPIA under *History*.

RIOUW-LINGGA. See NETHERLAND INDIA.

ROADS AND STREETS. Fifty-six per cent of the Federal-aid highway system of the United States, or 127,000 out of some 227,000 miles, had been completed, and 90 per cent improved in some degree on June 30. For the fiscal year 1935-36, three appropriations were made: Regular Federal-aid system and extension through cities, \$125,000,000; emergency relief, \$200,000,000 for highways and \$200,000,000 for eliminating dangerous grade crossings. Of the two latter sums, about 50 per cent will be spent on the Federal-aid system, 25 per cent on its operation through cities, and 25 per cent on secondary roads.

A Massachusetts innovation was provision of sidewalks along State highways. The legislature of 1935 allocated for sidewalks a third of its appropriation of \$12,000,000 to alleviate unemployment through public works construction. It was estimated that the appropriation, combined with Federal aid, would build 500 miles of walks, ranging from 24-in. foot paths to 8-ft. sidewalks. In general, the plan was to build 4-ft walks, surfaced with bituminous cement-concrete.

Australia and Africa. A novel method of making an improved road surface in parts of Australia where no gravel or rock for crushing is available has been tried on a large experiment scale in the

inland areas of New South Wales and Queensland. The soil, which is composed of adobe clay, is softened by even light rains, making passage difficult. To meet these conditions a slowly traveling furnace has been devised for baking the natural soil in place. A scarifier at the front of the machine tears up the earth before it is burned. After breaking down the burned clods with a roller and applying a clay binder the roadway is again rolled and is ready for traffic. To meet conditions where no roads exist and it is not feasible to build them, British engineers in the African colonies and in the interior of Australia have made trials of motor truck-trailer trains operating over long trackless reaches of country.

England, Germany, and Italy. A five-year British highway construction programme at an estimated cost of \$500,000,000 was officially announced on November 8. In Germany, a new motor highway between Darmstadt and Frankfurt-on-Main was dedicated early in the year, as the first link in a \$750,000,000 construction plan. In the course of a half dozen years it is expected that 5000 miles of roads will be improved, radiating from Frankfurt-on-Main. A belt highway encircling Greater Berlin for 112 miles is being built. (See *Zeitschrift des Vereines Deutscher Ingenieure*, Feb. 16, 1935, abstracted in *Engineering News-Record*, July 25, 1935, p. 111.) "From the most miserable road system in Europe," Italy is creating "a state-road and super-highway system that in quality challenges comparison with the highways of the world," says the journal last named.

Mexico, Central America, and Peru. A highway from Laredo, Tex., to Mexico City had been nearly completed in May. Only 56 of 760 miles then remained for construction. A reconnaissance survey for the Isthmian portion of a Rio Grande-Panama highway includes the line already mentioned and carries it from Mexico City to the city of Panama. Aerial surveys were a feature of the studies made for the route. In Peru a highway from Lima to Oroya, 111 miles, was opened on July 1.

References. For a symposium on Low-Cost Roadbuilding, see *Engineering News-Record*, June 27, 1935, pp. 905-10. See the same journal for details of some of the topics treated briefly in the preceding text: Massachusetts country sidewalks, Oct. 31, p. 610; Rio Grande-Panama highway, with line and aerial maps, May 30, pp. 766-69; Italian highway programme with maps and views, Nov. 14, pp. 665-74; Australian truck-trailer trains, and road surfaces baked in place, June 6 and August 8, pp. 185 and 812.

ROBINSON, EDWIN ARLINGTON. An American poet, died in New York City, Apr. 6, 1935. Born at Head Tide, Me., Dec. 22, 1869, he attended Harvard University for two years (1891-93), and for a few months was secretary to Charles S. Eliot, its president. He returned to Maine, and in 1896 his first book, which contained *The Torrent* and *The Night Before*, was published privately. He next issued *The Children of the Night* (1897) which confirmed his originality, but also emphasized the fact that he was for the few rather than the many. The critic, Edmund Clarence Stedman, acclaimed him as "a new poet of an individual cast of thought."

Robinson settled in New York City in 1900 and two years later issued *Captain Craig*, by which his position as a poet was assured. This volume was reissued, and in 1905, President Theodore Roosevelt, writing in *The Outlook*, introduced him to

the American public as the foremost poet of his era. *The Children of the Night* was then republished, and in 1910, *The Town Down the River*, that contained "Miniver Cheevy," his most quoted poem, was issued. For five years (1905-10) he served in the United States Customhouse, New York, through an assignment by President Roosevelt, who had offered him a post in the Embassy at Mexico, that he had declined. Then he turned his attention to playwriting, and wrote *Van Zorn* (1914) and *The Porcupine* (1915), but in the following year returned to his original muse and produced *The Man Against the Sky* (1916), that in turn, was followed by a presentation of the Arthurian legends, *Merlin* (1917) and *Lancelot* (1920), for which he was awarded the Lyric prize. In 1921 he issued *Collected Poems*, that were awarded both the Pulitzer Prize and the annual prize of the Poetry Society of America in that year. Twice again he received the Pulitzer Prize, first for *The Man Who Died Twice* (1924), and second for *Tristram* (1927), which was written in blank verse and ranked with the best of that type of work.

Considered the most representative of modern American poets, Robinson was neither a romanticist nor a pessimist, and his interpretation of life was as he found it, real, earnest, and serious. His work was distinctly intellectual, sincere in feeling, distinctively American in tone and point of view, and free from all that is trivial and meaningless. Upon a first reading, it might be considered cold, but upon reflection it is found to have passages of quiet beauty that illuminate the entire work with a glowing light.

Other of his works are: *The Three Taverns* (1920); *Avon's Harvest*, "his dime novel in verse" (1921); *Roman Bartholomew* (1923); *Dionysius in Doubt* (1925); *Collected Poems* (5 vols. 1927); *Sonnets* (1928); *Cavender's House* (1929); *The Glory of the Nightingales* (1931); *Nicodemus* (1932); and *King Jasper*, "a modern satirical comedy of humours," issued posthumously (1935).

He was a member of the National Institute of Arts and Letters and of the American Academy of Arts and Letters, and received the Gold Medal of the Institute in 1929.

ROCHESTER, UNIVERSITY OF. A nonsectarian institution of higher education for men and women in Rochester, N. Y., founded in 1850. It consists of three schools—the college of arts and sciences, composed of a college for men and a college for women on separate campuses, the Eastman School of Music, and the school of medicine and dentistry. A school of nursing is also maintained in conjunction with the Strong Memorial Hospital, the property of the university. The enrollment for the autumn session of 1935, exclusive of extension division and special music students, totaled 1947, distributed as follows: Arts and sciences, 1162; music, 285; medicine and dentistry, 169; graduate students, 231. For the summer session, 439 were enrolled in the arts college and 385 in the music school. There were 355 members on the faculty. The amount of endowment was \$54,093,147, and the total income for the year 1934-35 was \$3,659,471. The library contained 279,960 books. President, Alan Valentine, LL.D.

ROCKEFELLER FOUNDATION, THE. An institution chartered in 1913 for the permanent purpose of "promoting the well-being of mankind throughout the world." Its programme is concerned with certain definite problems in the fields of medical science, natural science, social science, the humanities, and public health. For work in

these fields the Foundation during the year 1935 appropriated approximately \$14,350,000 and expended approximately \$13,000,000. In addition to the new grants made during 1935, enumerated below, the Foundation continued to make payments toward many projects initiated in 1934 or earlier years, where support or assistance over a period of years was specified in the original appropriations.

The Humanities. A new programme in the humanities was developed during the year. Appropriations made in connection with this programme fall into the following groups: (1) grants directed toward developing available techniques and methods for increasing the area of public appreciation of cultural activities in the United States, and (2) support of projects planned to foster cultural interchange with other countries by improving methods of international communication.

For the work in the United States the following grants were made: to the Brooklyn Museum, for training personnel in the use of new techniques in visual presentation of museum objects; to the New York Museum of Science and Industry, for developing new methods of museum exhibition; to the University of North Carolina, Western Reserve University, and the State University of Iowa, for work in dramatic art; to Yale University, for the development of the library of the Department of Drama, to the Play House Foundation, Cleveland, Ohio, for a programme in community drama; to the University Broadcasting Council of Chicago, for developing radio programmes of educational and cultural value, and to the Museum of Modern Art, New York City, for the establishment of a motion picture department.

The programme for the advancement of international cultural understanding provides for (1) aid to national libraries in Europe and the Far East, for the training of personnel and for the establishment of modern services for finding and purchasing new publications; (2) the encouragement of mutual understanding between the United States and the Orient through support of facilities for training Americans in the Japanese, Chinese, and Russian languages, and aid for the dissemination of knowledge of Far Eastern cultures through the colleges, secondary schools, museums, and libraries of the United States, and (3) assistance in connection with the teaching of English as an auxiliary language and its use in international broadcasting for cultural purposes. Support given during 1935 for work along these lines included grants to the National Library of Peking, for bibliographical work, to the Bibliothèque Nationale for classifying its collection of Library of Congress index cards, to the Library Association, London, England, for the establishment of a service of information on library practice; to the Library of Congress, Washington, D. C., to enable its Far Eastern Centre to provide training in Chinese and Japanese; to the American Council of the Institute of Pacific Relations, for experiments in intensive teaching of the Chinese language to English-speaking students; to the Orthological Institute, London, England, for its work in adapting Basic English for use in the Far East; to Harvard University, for the preparation of material for the teaching of Japanese art; to Columbia University, for studies of English usage, to be carried out at the Institute of Educational Research, Teachers College, under the direction

of Prof. E. L. Thorndike, for the purpose of determining, for the guidance of persons preparing textbooks for the teaching of English as a secondary language, what words should be included in an initial English vocabulary; to World Wide Broadcasting Foundation (Station WIXAL), Boston, for its programme of international broadcasting.

The Medical Sciences. The greater proportion of the appropriations made during the year in the field of medical science were for the advancement of research in psychiatry and neurology. Funds were provided for a comparative study, by Prof. J. G. FitzGerald, of the teaching of preventive medicine, public health, and hygiene in medical schools of North American and Western Europe; for the support of fellowships in the medical sciences administered by the Foundation; and for grants-in-aid for workers engaged in research of importance in connection with the Foundation's programme in the medical sciences.

The Natural Sciences. In the natural sciences, support was given chiefly for biological research, especially for work contributing to an understanding of human behavior. Appropriations for projects dealing with nutrition problems, internal secretions, or sex research were made to the Ohio State University, for research on the chemical, physiological, and clinical aspects of the hormone of the adrenal cortex; to the University of California, for the study of the chemical aspects of vitamins and hormones, to the Laboratory of Histology of the University of Paris, for research on endocrinology and vitamins; to the University of Virginia, for research on endocrinology; to the University of Rochester, for research on the physiology of reproduction in the monkey.

The largest group of projects aided comprised those in which physical, chemical, or mathematical techniques were directed toward the solution of basic biological problems, and included grants to McGill University, George Washington University, Columbia University, the Institute of Physics of the Polytechnic School, Graz, Austria, the Massachusetts General Hospital, and the universities of Chicago, Michigan, Rochester, Copenhagen, Leeds, Oxford, Stockholm, Uppsala, and Utrecht. Coordinated programmes of research in a number of related fields of modern biology in which the Foundation is especially interested were aided by grants to the University of Chicago, Ieland Stanford, Junior, University, and the California Institute of Technology, as well as to the National Research Council, for the work of its Committee for Research in Problems of Sex and the Committee on Effects of Radiation upon Living Organisms. An appropriation was also made to the Long Island Biological Association toward the expenses of symposia to be held in the summers of 1936 and 1937.

In carrying through projects aided under the former natural sciences programme, a grant was made to the Woods Hole Oceanographic Institution, for endowment, and another to Harvard University, for research in geophysics.

Other grants were made to the American Institute of Physics, for underwriting its plan for financing scientific publications, to the Massachusetts Institute of Technology, toward costs of developing an improved differential analyzer, a device for the mechanical solution of differential equations; to the National Research Council, for its fellowship programme in the physical and biological sciences, and toward the expenses of editing

and indexing *Biological Abstracts*. Funds were also made available to provide grants in aid for selected workers carrying on research in the natural sciences, and for fellowships in this field administered by the Foundation.

Public Health. In the field of public health, funds were supplied for research on a number of selected diseases, for demonstrations in the control of certain of these diseases in their environments, for coöperation with governments in the organization or improvement of important services of central or local departments, for State health surveys, and for the development of public health education. Fellowships in public health and public health nursing were provided and health personnel were given opportunities for training in connection with the health demonstrations and through travel.

The Social Sciences. In the social sciences, interest centred on international relations, economic security, and public administration. In the sphere of international relations, grants were made to the Institute of Pacific Relations and to the Council on Foreign Relations, for their research programmes; to the Foreign Policy Association, for the support of its experimental educational programme and its research department; to Yale University, for the research programme of its Department of International Relations; to the Center for Studies of Foreign Politics, Paris, and the John Casimir University, Lwow, Poland, for research on problems of international relations; to the International Institute of Intellectual Coöperation, Paris, for the organization of the research programme of the International Studies Conference and the maintenance of a secretariat; to the American Geographical Society, for the preparation and publication of a Millionth Map of Hispanic America; and to Prof. H. C. Taylor, for a world-wide study of agricultural economics, with particular reference to national and international planning.

In the interests of economic security, contributions were made to the Social Science Research Council, for work in connection with social insurance and organized relief; to the Industrial Relations Counselors, Inc., for providing services on an unpaid basis to state and Federal agencies, in the field of economic security; to Harvard University, for research on the business cycle; to the Austrian Institute for Business Cycle Research, toward its general budget; to the Wharton School of Finance and Commerce, University of Pennsylvania, toward the support of its Department of Industrial Research; to the University of Manchester, England, the Polish Academy of Science, and the University of Sofia, toward the support of economic research.

The programme in public administration included grants to the Spelman Fund of New York, for the support of its work in this field; to the Social Science Research Council, for the use of its Public Administration Committee; to Harvard University, toward the support of its programme of training for public service; to the School of Citizenship and Public Affairs, Syracuse University, for the expansion of its training course in public administration, to the American University, Washington, D. C., for the support of a programme for training junior executives in the Federal service in the principles of public administration; to the National Institution of Public Affairs, Washington, D. C., for directing the programmes of graduate students attached to the Federal service for the purpose of obtaining practical field experience; to the Community Council of Philadelphia, toward the sup-

port of the Joint Committee on Research; to the New Hampshire Foundation, for research on the administration of state and local governments.

An appropriation was made to the Social Science Research Council, for its fellowship programme, and funds were provided for fellowships in the social sciences administered by the Foundation, and for grants in aid for research workers.

Officers. The executive officers of the Foundation in 1935 were: John D. Rockefeller, Jr., chairman of the Board of Trustees; Max Mason, president; Thomas B. Appleget and Selskar M. Gunn, vice presidents; Alan Gregg, M.D., director for the medical sciences; Warren Weaver, director for the natural sciences; Edmund E. Day, director for the social sciences; David H. Stevens, director for the humanities; Frederick F. Russell, M.D. (retired, September, 1935), and Wilbur A. Sawyer, M.D., directors of the International Health Division; Norma S. Thompson, secretary; Lefferts M. Dashiell, treasurer; George J. Beal, comptroller; Thomas M. Debevoise, counsel, and Chauncey Belknap, associate counsel. Offices were maintained at 49 West Forty-ninth Street, New York City.

ROGERS, WILLIAM PENN ADAIR, "WILL." An American humorist of part Indian ancestry, died in an aeroplane accident at Walkpi, near Pt. Barrow, Alaska, Aug. 15, 1935. He was born at Oologah, Indian Territory, Nov. 4, 1879, and attended the Willie Hassell School, Neosha, Mo., and the Kemper Military Academy at Boonville, Mo. With money received from the sale of a ranch, he set off to see the world. He traveled in Africa, China, and Australia, and when his money ran out, his skill with the lariat found him work with a Wild West show in Australia. Later he joined Zack Mulhall's Wild West Troupe.

His first appearance on the vaudeville stage was made in New York in 1905. His act consisted of roping a horse with one lasso and its rider with another. He first began to speak on the stage in order to explain the difficulty of his act, but it was not until 1912 that he was successful as a monologist. His first appearance on the legitimate stage was made three years later in *Hands Up*. In September of that same year he appeared in *Town Topics*, and in 1917 he was in *The Passing Show* and the *Ziegfeld Folies*. It was during this period that he began to develop his spontaneous wit and to read the newspapers so carefully. He left the *Folies* in 1918 to appear in motion pictures, achieving a moderate success. In 1921 he appeared in the *Midnight Frolic*, but after a year returned to the screen.

In 1922 and again in 1924 the stage claimed him and he played in the *Folies* at one of the largest salaries ever paid to an actor. In recent years, Mr. Rogers had deserted the stage for the screen, but in 1928, when Fred Stone was injured and had to leave the cast of *Three Cheers*, he took his place and appeared until Mr. Stone was able to rejoin the troupe. His last appearance on the stage was with a road company of *Ah Wilderness*.

Upon the advent of the talking picture, Rogers again essayed this field and proved very successful. He appeared in *They Had to See Paris* (1929), *Happy Days* and *So This Is London* (1930); *Ambassador Bill*, *Business and Pleasure*, *Down to Earth*, and *Too Busy to Work* (1931, 1932); *State Fair*, *Doctor Bull*, *Mr. Skitch*, and *David Harum* (1933); *Handy Andy* and *Judge Priest* (1934); *The County Chairman*, *Life Begins at Forty*, *In Old Kentucky*, and *Steamboat 'Round*

the Bend (1935), the last two named released posthumously.

Mr. Rogers, one of America's foremost humorists, with his homespun philosophical comment upon affairs of the day, won a large audience with his syndicated newspaper articles and his radio appearances. From 1926 he contributed daily to the *New York Times*, and more recently he appeared on various commercial radio programmes. On one occasion he gave an imitation of President Coolidge which caused a great furor. In 1924, as well as in 1928, he covered the national political conventions for the *New York Times*, and he himself had received nominations for various offices, at one time even being seriously considered as a presidential nominee. For several years he was the Mayor of Beverly Hills, Calif. Also, on several occasions he acted as "good will" ambassador to foreign countries.

Much of his time was devoted to raising funds for charities, particularly Red Cross relief, and he was especially active at the time of the Mississippi Flood in 1927 and the Drought Relief Campaign of 1930-31. In October, 1935, he was posthumously awarded the Spirit of St. Louis Medal of the Aeronautical Division of the American Institute of Mechanical Engineers for his interest in and aid to aviation. It was while on a vacation flight with Wiley Post (q.v.), the aviator, that he met his death.

Mr. Rogers published *The Cowboy Philosopher on Prohibition* (1919); *The Cowboy Philosopher on the Peace Conference* (1919); *What We Laugh At* (1920); *Illiterate Digest* (1924); *Letters of a Self-Made Diplomat to His President* (1927); *There's Not a Bathing Suit in Russia* (1927); *Will Rogers's Political Follies* (1929).

ROLLINS COLLEGE. A nonsectarian, coeducational institution of higher learning in Winter Park, Fla., founded in 1885. The enrollment for the fall term of 1935-36 was approximately 400. The full-time faculty members numbered 56. The productive endowment, and other invested funds serving as endowment, amounted to approximately \$1,250,000, yielding an annual income of about \$53,000. The income from all other sources was in excess of \$250,000. The library contained approximately 46,000 volumes, in addition to 5000 public documents.

Rollins was the first college to change from the old established method of charging only part of the cost as tuition to the unit cost plan, which charges the student the full cost of instruction and sets aside endowment income and gifts for the benefit of those who cannot pay cost, exclusively. This was made effective with the class entering in September, 1933. President, Hamilton Holt, Litt.D., LL.D.

ROMAN CATHOLIC CHURCH. The concluding ceremonies of the extension of the Holy year; the issuance of important announcements, particularly against war and for peace; Eucharistic Congresses, and several canonizations were noteworthy events in the Church during 1935. As a climax to the end of the Holy Year, Pius XI in January directed a triduum of public prayers in April at Lourdes with all the faithful associating themselves. He announced an extraordinary dispensation for the event. "We have thought there could be no better way to crown the Jubilee Year . . . than by having the Sacrifice of the Holy Eucharist celebrated uninterruptedly for three days and nights at the miraculous Grotto of Massabielle in an atmosphere of ardent piety. . . . We trust, therefore, that to the abundant fruits of the Holy

Year, still other and more copious will be added, and that, through the intercession of the Immaculate Virgin, the rainbow of peace will finally arise over the tormented world." On March 17, at the reading of the decree proclaiming the heroism and virtue of Venerable Mother Philippine-Rose Duchesne, who established the first houses of the Sisters of the Sacred Heart in America, the Pope gave a particular blessing to France and the United States. In an allocution on April 1, at the secret consistory for the canonization of John Cardinal Fisher and Sir Thomas More, English Martyrs proclaimed on February 16, the Holy Father spoke on current threats to peace. "There is cause indeed for sadness. While the damage of the last European War has not yet been repaired, We behold again the horizon darkening with evil clouds. . . . That peoples should again take up arms one against the other; that the blood of brothers should again be shed; that on the earth and sea and from the sky destruction and ruin should be shed on all would be a crime so enormous . . . that We believe it absolutely impossible. . . . But if any should dare to commit this evil crime . . . then the least We shall be able to do is to turn to God with embittered soul and the prayer: 'Scatter Thou the nations that delight in wars.'"

Of the English Martyrs, His Holiness expressed "confidence that this will be a fortunate and happy presage not only for Our beloved English people, but also for the whole Catholic Church. . . . We hope that this solemn occasion is bringing special fruit to those having the same country and language as the Blessed Martyrs. We know, in fact, that . . . particularly in our days the English feel more ardently a home-sickness for the faith of their fathers and a return to the Apostolic See, which first took the Christian faith and worship to England and which, while non-Catholic sects are constantly crumbling, remains the sole base and column of truth." After addressing the gathering at Lourdes by radio on April 29, the Pope descended to St. Peter's where he solemnly intoned a *Te Deum* and took part in the Solemn Holy Hour of Adoration. On May 19, the Pope entered St. Peter's, where 40,000 were gathered, and proclaimed the canonization of Saints Thomas More and John Cardinal Fisher. The Pontiff requested prayers "that England . . . meditating on the lives of the two Martyrs, may follow them in their faith and return to their Father's House in unity of faith and knowledge of the Son of God. Let those who still are separated from Us consider attentively the ancient glories of the Church of Rome. Let them consider and remember that this Apostolic See has been waiting for them so long and so anxiously, not as coming to a strange dwelling place, but as returning to their paternal home." The creation of the two Saints at this time was hailed as most opportune in answer to modern conflict between Cæsar and God.

To a deputation of Belgium journalists on June 3, the Pope called the Catholic Press an "all important apostolate for the Propagation and conservation of Catholic faith and morals." He spoke also of the International Catholic Press Exposition to be held in Vatican City in 1936, and expressed the hope that it will be attended by excellent results and prove a revelation, particularly as regards the missionary press. On July 29, he participated in the ceremonies marking the reading of the decree of heroism and virtues of Justin de Jacobis, Italian Lazarist priest and first Vicar Apostolic to Ethiopia. Although "between Italy

and Ethiopia, the sky is crossed by clouds," Pius XI declared he "hopes and will always continue to hope in the Peace of Christ and in the Kingdom of Christ." The Church struggle in Germany was referred to in his address to German Catholic youths from the diocese of Trier on August 6.

On July 31 morning, the Holy Father left Vatican City to motor to his estates at Castelgandolfo for relief from the city's heat during the summer. Audiences and work were continued there uninterruptedly. On August 31, he received 1500 women delegates to the International Committee of Catholic Associations of Nurses and delivered an important statement on the Italo-Ethiopian war.

"We already see that abroad they speak of conquest and an offensive war," he declared. "This is a hypothesis whereon We wish not to dwell. War of pure conquest would be unjust, an indescribably sad and horrible war. . . . In Italy it is said to be a just war, because it is a war of defense to insure frontiers against continuous, incessant dangers and a war becomes necessary to care for the expansion of a population that is always increasing. However, it is true that, if this need for expansion exists and that there is also necessity to insure frontiers, We cannot but hope that it will be possible to arrive at a solution of every difficulty by other means than war. . . . It seems to Us beyond doubt that, if the necessity for expansion is a fact which must be taken into consideration, the right of defense has limits and confines which must be observed so that defense will not be a guilty one. In any case, We pray that God will second the activity and industry of those far-seeing men who understand the exigencies of the real happiness of people and of social justice—those men who do everything possible, not by means of threats, which cannot but aggravate the situation by irritating spirits; not by temporizing, through which precious time is lost, but with truly humane intention and by the utmost exertion of efforts advance the work of pacification with the aim of preventing war. We pray that God will bless this activity. We ask you to pray with Us." The Pope celebrated Mass on September 7 in the Basilica of St. Paul-without-the-Walls for 12,000 war veteran pilgrims from 16 countries and 2000 chaplains. In an address to them he spoke of his desire "that the hopes and needs of a great and good people, who are also Our people, their aspirations and exigencies, be recognized and satisfied but with justice and peace, because opposed to justice is sin alone and sin renders people miserable, with peace because peace is already in itself far removed from all those evils that war brings for all people who are guilty of it, and because peace is an essential condition to all prosperity and welfare." The Pope declared, in inaugurating the new Vatican astronomical observatory at Castelgandolfo on September 30, that he considers scientific activity an integral part of his priestly ministry. On October 28, addressing the concluding ceremonies of the First National Eucharistic Congress of Peru in Lima, the Pope prayed: "May God grant that this Christian spirit, the sole source of true peace, be diffused over all the earth and quickly come and move and reconcile the hearts in those parts, above all of Europe and Africa, where peace, alas, is already too disturbed and gives fear of worse misfortune." Declaring at the Secret Consistory on December 16 that he did not wish to speak of the Italo-Ethiopian conflict for fear his words might be misunderstood or deliberately distorted, Pius XI said:

We have repeatedly said all that could in this connection be justly and legitimately expected from us in the interests of truth, justice, and charity. . . . Let this be a word of warning, particularly to those who still seem surprised or scandalized as though we have not performed our divine mission of master of the faithful. But as we have not neglected in the past and shall not neglect in the future to affirm, so now we repeat solemnly to all men of good will, in whatever land they may belong, that we most ardently desire and are striving to prove and fervently pray that God give us that peace which is joined with justice, truth, and charity.

"This is a sad Christmas," the Pope said in a Christmas allocution to the Sacred College of Cardinals, "obscured by dark and threatening clouds already tinted with human blood, while the future appears even more uncertain and ominous." While he prayed that God would dispel these menaces to the world, the Pope added, without actually mentioning the countries concerned, that other reasons for sorrow were the continuance of the anti-God campaign in Russia, the oppression of religion in Mexico and the fight against Christianity in the name of a new Christianity being waged in Germany. On the same day, the Pope issued an important encyclical to all Archbishops and Bishops dealing with problems of priesthood, inspired throughout by a lofty conception of the mission and duties of the clergy. "The office of the priest is not for the things human or for the things that pass away, however important and valuable these may seem, but for the things divine and enduring, the eternal things. . . . The priest must have a thorough and deep mass of sacred learning and in addition must be graced by not less knowledge and culture than is usual among the well-bred and well-educated people of his day."

During his Pontificate, Pius XI has created 103 dioceses and archdioceses; elevated 7 sees to archdioceses; established 19 abbeys and prelatures nullius. Known as "the Pope of the Missions," he has created 38 vicariates apostolic; elevated 46 prefectures, 20 of which he created, to vicariates; created 72 other prefectures apostolic and 24 missions and districts *sui iuris*. During 1935, he created 13 new dioceses, 2 new prelatures nullius, and 7 sees were elevated to archepiscopal rank. This is the first year during which the Pontiff elevated any diocese to an archdiocese. The Hierarchy is now composed of 7 suburbicarian sees, 10 residential and 4 titular Patriarchates, 214 residential archepiscopal sees; 911 residential episcopal sees (an increase of 6); 688 titular metropolitan, archepiscopal, and episcopal sees (an increase of 1); 266 vicariates (an increase of 10); 107 prefectures apostolic (an increase of 3); and 35 missions and districts *sui iuris* (a decrease of 1 due to elevation to higher rank.)

The 1935 report of the Sacred Roman Rota listed 96 marriage cases which had been submitted to this tribunal. Of these the validity of 42 marriages was upheld, 38 were declared null; and 16, which were heard on appeal, were upheld. Of the 96 cases, 63 were brought by those without funds; 33 by those with funds. Of the cases where nullity was declared 25 were those brought by the poor; 13 by those who paid court charges.

In the diplomatic field, activity has been uninterrupted. The visit of Premier Laval of France to His Holiness in March, the first from the French head of government since 1870, called attention to the new cordiality between France and the Holy See. This was further evidenced by the extraordinary state reception given Cardinal Pacelli, the Papal Secretary of State, when he went to France to preside as Papal Legate at the Triduum in

Lourdes. Another eloquent confirmation of these excellent relations with France and particularly with her Chief Executive, was the Pope's conferring the decoration of the Order of Christ on President Le Brun in the Vatican. In Spain there had been a decided rapprochement between the Holy See and the government. During Holy Week the traditional religious observances were held throughout the entire country for the first time since the overthrow of the monarchy. Due to the reported personal intervention of King Gustav, the Congregation of St. Bridget opened its first convent at Vadstena, Sweden. The order, founded in the 14th century by Sweden's patron Saint, Bridget, was suppressed with other religious orders by law in 1523. Although the law was not abrogated, the ban was dispensed in the case of these holy women. The situation of the Church in Mexico remains grave. Attempts of the present administration to socialize all education has met with the non-violent opposition of the clergy and laity; and numerous other oppressive measures have been variously enforced. At least in 14 of the 29 states, no priests are allowed to minister to millions of Catholics within their borders. Only 333 priests are allowed to serve 15,012,573 souls. Commentators, both Catholic and non-Catholic, see in the Government's course a pronounced policy of warring against any and all religions. Laymen organizations in the United States, publicly and officially, have urged the President and Congress to withdraw recognition of the present Mexican government or to take other appropriate steps. In Germany, the Nazi party has violated the Concordat signed by Reichchancellor Hitler. Action against Catholic youth organizations was intensified. Assembled at Fulda, the German Bishops wrote a pastoral letter, signed by 26 prelates, which was read to the faithful. They vigorously denounced the neo-paganism of certain Nazi leaders. As well, they attacked the shackling of the press, the nature of the sterilization and marriage laws, the activities of the Hitler *Jugend* and the attack upon denominational education. They also urged Catholics to "engage in no revolt and offer no resistance through violence." The arrest of many religious of both sexes, even of many high in the hierarchy, has made the situation more deplorable. The Holy See signed a Concordat with Yugoslavia, where conditions had been particularly bad since the kingdom's creation due to the hostile attitude of orthodox Serbs to Catholic Croats and Slovenes. The Concordat, recognizing these conditions, aims to correct them.

Assemblies. On April 26 began the Solemn Triduum at Lourdes which marked the end of the Holy Year; 400,000 pilgrims participated in the ceremonies presided over by the Papal Secretary of State, Eugenio Cardinal Pacelli, designated as Papal Legate. His Eminence was received with exceptional honors by the French government. Minister of State Louis Martin met him at Ventimiglia on the border, and a reception was held for him at Nice with 50,000 present. Four Cardinals and 80 prelates participated in the ceremonies at Lourdes where Mass was continuously celebrated morning and night for three days at the famous Grotto where the Blessed Virgin appeared to St. Bernadette Soubirous. Cardinal van Roey, Archbishop of Malines, presided at the first Solemn Pontifical Mass; Cardinal Binet, Archbishop of Besançon, the Mass on the second day; Most Rev. Luigi Maglione, Apostolic Nuncio to France, on the third; and the Papal Legate at the closing

Mass. Pope Pius XI addressed the gathering by radio, extended his blessings to the pilgrims and the world, and prayed that "we may finally enjoy the untroubled gifts of peace." Unusually impressive ceremonies and popular enthusiasm marked the Seventh National Eucharistic Congress held at Cleveland on September 24-26. Patrick Cardinal Hayes, Archbishop of New York, was the Papal Legate, the first American Cardinal to serve in that capacity. Over 400,000 were present from every State of the Union and practically every foreign country. The Cleveland celebration surpassed all other events of this kind in America. A special feature for the closing ceremonies was the formation by 20,000 people of a living monstrance at the centre of which the Papal Legate celebrated Benediction and gave the Papal Blessing to the assembled multitudes. The Pope, broadcasting to America, expressed his joy over the Congress' success. The First General Congress of Catholics of Czechoslovakia drew 350,000 visitors to Prague, July 15. Jean Cardinal Verdier, Archbishop of Paris, attended as Papal Legate and was received with honors accorded a visiting sovereign. Dr. Eduard Beneš, Foreign Minister, entertained the Legate at a dinner at which the Premier and other cabinet ministers, the diplomatic corps, and civic and ecclesiastical dignitaries were present. The First National Eucharistic Congress in Scotland was held in Edinburgh June 24-26.

The Cardinals. Francis Cardinal Bourne (q.v.), Archbishop and Metropolitan of Westminster and head of the Catholic Church in England, died January 1. The only English Cardinal since 1911, he was largely responsible for the great advance of the Church in England during the present century. Vatican circles as well gave him much credit for "formulating the ideas on which were based the negotiations" between Italy and the Holy See which resulted in the creation of Vatican City in 1929. Achille Cardinal Locatelli, titular Archbishop of Thessalonica, the first Cardinal to be created by the present Pontiff, died April 5. His Eminence was most active in the diplomatic field, having served as Papal Nuncio to Monaco, Brussels, Paris, and Vienna; and as Papal Internuncio to Argentina, Paraguay, and Uruguay. He also did important work as a member of the Congregations of Sacraments, Religious, Ceremonies, and Extraordinary Ecclesiastical Affairs. Pietro Cardinal LaFontaine, Patriarch of Venice, died July 9. Considered as a possible successor to Benedict XV, he was a member of the Congregations of Congresses and Sacraments. Paul Pierre Cardinal Andrieu, Archbishop of Bordeaux, died February 14. During the World War he took a deep interest in the welfare of American soldiers in the camps at that important debarkation port. Michele Cardinal Lega, Bishop of Frascati, died December 16. He became Dean of the Sacred Roman Rota in 1908 and at the time of his death was Prefect of the Congregation of Sacraments. Previously he had served as Papal Legate at Faenza, Ravenna, and Padua, and was appointed *sous doyen* of the Sacred College in 1931.

At a secret consistory on December 16 and a public one on December 19, the Pope created 20 new cardinals, one of the most important elevations numerically in the annals of the Church. From the lowest in many years, the Sacred College of Cardinals was thereby raised from 49 to 68, leaving two vacancies. This is the highest figure in history, for precedent once required three or four vacancies. The new Cardinals are: Most Rev. Carlo Salotti,

Secretary of the Congregation for the Propagation of the Faith; Most Rev. Luigi Copello, Archbishop of Buenos Aires; Msgr. Nicolas Canali, Assessor of the Congregation of the Holy Office; Msgr. Federico Tedeschini, Nuncio to Spain; Msgr. Luigi Maglione, Nuncio to France; Msgr. Emanuele Suhard, Archbishop of Rheims; Msgr. Enrico Baudrillart, President of the Catholic Institute of Paris; Msgr. Dominic Jorio, Secretary of Sacrament of the Roman Congregation; Msgr. Massimo Massimi, Dean of the Rota Tribunal; Msgr. Enrico Sibilila, Nuncio to Austria; Msgr. Francesco Mar-maggi, Nuncio to Poland; Most Rev. Isidoro y Tomas, Archbishop of Toledo; Most Rev. Carlo Kaspar, Archbishop of Prague; Msgr. Carlo Cremonse, Papal almsgiver; Msgr. Vincenzo la Puma, Assessor to the Holy Congregation; Msgr. Frederick Cattani Amadori, Secretary of the Apostolic Signatura; Msgr. Dominico Mariani, Treasurer of the Papal Ministries; Msgr. Ignazio Gabriele Tappouni, Patriarch of Antioch; Rev. Pietro Boetto, S.J., assistant to the General of the Society of Jesus.

The Hierarchy. Most Rev. Francis Hoowarts was appointed Vicar Apostolic to Tsaochowfu, Shantung, China, January 2; Most Rev. Edward J. Hanna, Archbishop of San Francisco, was made titular Archbishop of Gortyne, and Most Rev. John J. Mitty, Coadjutor Bishop of San Francisco, on March 8; Most Rev. Joseph Francis Rummel, Bishop of Omaha, was named Archbishop of New Orleans, March 18; Most Rev. Arthur Hinsley, titular Archbishop of Sardes, was named Archbishop of Westminster, April 4; Most Rev. Raymond Prendiville, titular Bishop of Cipsila, was made Archbishop of Perth, Australia, June 10; Most Rev. James H. Ryan, titular Bishop of Modra and Rector of Catholic University, was made Bishop of Omaha, August 6, Most Rev. Xavier Ritter was named Apostolic Nuncio to Prague, August 19, Most Rev. Ralph L. Hayes, Bishop of Helena, Mont., was appointed Rector of North American College, Rome, September 11; Count Preysing, Bishop of Eichstadt, was made Bishop of Berlin; Most Rev. Joseph C. Plagens, Auxiliary Bishop of Detroit, was named Bishop of Marquette, November 20; Most Rev. Gerald P. O'Hara, Auxiliary Bishop of Philadelphia, was named Bishop of Savannah to succeed Most Rev. Michael J. Keyes, who resigned because of ill health; Very Rev. Richard Pittini, S.C., was made Archbishop of Santo Domingo, November 2.

These new Bishops were appointed in 1935: Rt. Rev. Msgr. William R. Griffin, titular Bishop of Lidda and Auxiliary of LaCrosse, April 5; Rt. Rev. Charles Hanlon, C.P., Bishop of Catamarca, Argentina, April 21; Rt. Rev. Msgr. Henry Muehn, S.V.D., Bishop of newly-created diocese of Jujuay, Argentina, February 17; Rt. Rev. Msgr. Thomas H. McLaughlin, titular Bishop of Nisea and Auxiliary to Newark, May 20; Rt. Rev. Msgr. Francis Xavier Ford, titular Bishop of Etenna and Vicar Apostolic to Kaying, China, June 24; Rt. Rev. Msgr. Philip Cote, S.J., Vicar Apostolic to Suchow, China, July 6; Rt. Rev. Msgr. George L. Leech, Auxiliary to Harrisburg, July 12 and Bishop of Harrisburg, December 16; Rt. Rev. Msgr. Aloysius J. Muench, Bishop of Fargo, August 12; Rt. Rev. Msgr. Peter Leo Ireton, Coadjutor Bishop of Richmond, August 6; Rt. Rev. Michael McGrath, Bishop of Menevia, Wales, October 7; Rt. Rev. Msgr. Joseph M. Gilmore, Bishop of Helena, December 16; Rt. Rev. Msgr. Hugh L. Lamb, Auxiliary Bishop of Philadelphia, December 17.

These deaths occurred in 1935: Most Rev. Francis M. Redwood, Archbishop of Wellington, N. Z., January 2; Most Rev. John J. Monaghan, titular Bishop of Lidda and retired Bishop of Wilmington, January 8; Most Rev. José Bottaro, O.F.M., titular Archbishop of Macra and former Archbishop of Buenos Aires, June 1; Most Rev. Paul Joseph Nussbaum, C.P., Bishop of Marquette, June 23; Most Rev. Nikolaus Bares, Bishop of Berlin; Most Rev. Francis Marie Kersuzan, titular Archbishop of Sergiopolis and former Bishop of Cap Haitien, July 23; Most Rev. Peter Hurth, C.S.C., Titular Archbishop of Bosra, March 3; Most Rev. Philip R. McDevitt, Bishop of Harrisburg, November 11; Most Rev. Alphonse John Smith, Bishop of Nashville, December 16.

The Missions. The Society for the Propagation of the Faith received during 1934, \$3,600,000, an increase of \$1,200,000 over the preceding year. In the foreign missions fields there are 18,020 foreign and native priests, 8755 coadjutor brothers, 50,555 foreign and native sisters, 74,147 catechists, and 62,087 teachers. The Catholic population of China is 2,702,468, an increase of 78,908 over 1934. There are in China 89 Bishops, of whom 14 are natives; 2354 foreign and 1660 native priests; 1831 foreign and 3319 native sisters; 1148 brothers (more than half of whom are natives); and 3979 primary and secondary schools. 465,000 Chinese are under instruction for conversion. There are 250,747 Catholics in the Japanese empire; 350,000 in Oceania; 417,787 in the Dutch East Indies, 1,250,000 in Australasia. The Philippines number approximately 10,000,000 Catholics served by over 2000 priests, Guam, 15,800 served by 9 priests and Samoa, 1412 with 2 priests. There are 113,226 Catholics in Hawaii and 52 priests. In the Virgin Islands and Puerto Rico the Catholics are estimated at 1,600,000 with 279 priests; in Belize, 31,350 with 33 priests, and in Jamaica, 54,000 with 27 priests. There are 11,318 Catholics in Alaska, 5335 of whom are natives, 44 churches and 25 priests. In Africa there are almost 7,000,000 Catholics; in India, Burma, and Ceylon, 3,682,133; and in Malaya, 80,000.

Statistics. The total Catholic world population is approximately 350,000,000, or about 19 per cent of all. Figures compiled by the Official Catholic Directory for 1935 put the Catholic population of the United States proper at 20,523,053, an increase of 200,459. The number of converts was 63,845, or 14,664 more than in the previous year. The Hierarchy now numbers 18 Archbishops, 4 of whom are Cardinals, and 112 Bishops. The secular priests number 20,836, an increase of 381 over 1934, and the priests of religious orders number 9414, an increase of 250. The churches total 18,344, an increase of 100, and include 12,680 churches with resident pastors and 5664 missions with churches. The number of seminaries increased by 8, the total being 193; and the seminarians increased by 3114, the total being 23,579. There are 191 colleges for boys, an increase of 6. Colleges and academies for girls total 661, a decrease of 7. There are 1134 high schools, 106 more than in 1934, with a total attendance of 186,948, a gain of 4240. The number of parochial schools is 7422, a decrease of 7 from 1934, and an attendance of 2,209,673, a decrease of 15,080. The number of orphanages is 324, a decrease of 2, and the number of orphans cared for was 43,769, or 2505 less than in 1934. There are 155 homes for the aged poor, an increase of 8, and there are 659 hospitals with 412 nursing schools. Catholic chaplains attached to the U.S. Army number 31; to the U.S. Navy, 13; 20 in veteran hospitals; 16 auxiliaries; and 38 Military

ROWING. Rowing once more gained its high estate among college sports in 1935 and in both the long distance four-mile races and the shorter races there was unusually keen competition and the performances were of a high grade. The University of California eight-oared crew was the outstanding one of the year, winning the annual Poughkeepsie race for the third time in a row. The Golden Bears won in 1932 and then went on to Olympic conquests, won in 1934 when the Hudson event was renewed and in 1935 nipped

ROSICRUCIAN ORDER. An international fraternity, known as the Ancient, Mystic Order Rosæ Crucis, whose name is derived from the emblem, a cross with a single rose in its centre, adopted by Johann Valentin Andreæ, erroneously regarded as the restorer of the order in Germany in the 17th century. (For details as to the traditional origin and reestablishment of the order in North America, see the **NEW INTERNATIONAL YEAR BOOK**, 1932.) In 1935 the Rosicrucian Order in North America had throughout its jurisdiction of the United States and its dependencies, Canada, the West Indies, and the Central American states

Cornell in a grueling race that was close to a dead heat. Washington was third, with Navy, Syracuse, Pennsylvania, and Columbia trailing in that order. California also triumphed in the national intercollegiate sprint championship at Long Beach, Calif. later in June, finishing six feet ahead of Washington over the 2000 meter course. The other 4-mile race of the year, the annual Harvard-Yale regatta on the Thames at New London, was a procession with a superb Yale boatload leading Harvard by at least twelve lengths. Yale's oarsmen also captured the junior varsity and freshman events. As usual, Cambridge won the annual race from Putney to Mortlake from Oxford. Cambridge also won the coveted Grand Challenge Cup at Henley in July.

The preliminary season was dominated by Pennsylvania, superior over the short distances. The Pennsylvanians beat Yale and Columbia in the Blackwell Cup, Princeton and Columbia in the Childs Cup, and Navy and Harvard in the Adams Cup. The Carnegie Cup regatta was blown away by high winds on Lake Cayuga. Rowing continued to grow and in early June the beginners staged a regatta at Marietta, O., with crews from Marietta, Rutgers, Pennsylvania, Manhattan, Wisconsin, and Rollins competing. Rutgers won the varsity race. The New York Athletic Club eight was the outstanding club crew of the season, winning the national championship at Princeton. The national sculling title went to a Canadian, Charles Campbell of the Toronto Argonauts. L. Ruffli, a Swiss sculler, won the Diamond Sculls at Henley and the world's professional sculling title was again taken by powerful Bob Pearce, the Australian who lives in Toronto. Bill Miller of Philadelphia was his closest rival.

ROYAL PHOTOGRAPHIC SOCIETY.

See PHOTOGRAPHY.

RUANDA-URUNDI, rū-ān'da ōō-rōōn'dē. Two districts (formerly in German East Africa) mandated to Belgium by the League of Nations, and united for administrative purposes with the Belgian Congo in 1925. Area, 20,535 sq. miles, population, 3,035,130 including 803 Europeans. Capital, Usumbura.

The principal occupation of the country was the raising of livestock. In 1934, imports were valued at \$800,000; exports, \$400,000 (amounts are based on old U.S. gold dollar, of 1.50463 gram fine gold). For 1934, the estimated total revenue was 42,328,900 francs; estimated total expenditure, 40,513,800 francs (5 paper francs were equal to 1 belga which averaged \$0.2329 for 1934). The public debt on Jan 1, 1934, was 145,500,000 francs. According to the law of Aug. 21, 1925, both districts were united, for administrative reasons, with the Belgian Congo and placed under the supervision of a vice-governor.

RUBBER. The rubber industry of the United States continued its growth during 1935 to a new all-time high, according to *India Rubber World*, New York. The consumption of crude rubber was 6 per cent above the previous banner year of 1929 and more than three times as great as in 1917. According to the Leather and Rubber Division of the U.S. Department of Commerce, consumption in the United States totaled 505,160 long tons. In 1934 the consumption was 463,676 long tons. World absorption for the year amounted to 956,428 long tons as against 931,943 long tons in 1934.

The basic quotas of production signed by the representatives of the leading producing countries in 1934 were found, after 18 months of trial, to

work a grievous hardship upon natives of the Netherland East Indies. As a result, the International Rubber Regulation Committee after careful consideration, recommended on December 3 to the several signatory governments that the basic quotas allotted to the Netherland East Indies be revised to permit 1936 production to rise from 443,000 tons to 500,000 tons, 1937 from 467,000 tons to 520,000 tons, and 1938 from 485,000 to 540,000 tons.

From preliminary reports furnished by the U.S. Department of Commerce, the shipments of crude rubber in 1935 from all parts of the world are shown in the accompanying table.

WORLD RUBBER SHIPMENTS, 1935
[Long tons]

British Malaya	415,667
Brunei and Labuan	1,228
Ceylon	54,316
India and Burma	14,279
Sarawak	19,465
British North Borneo	8,885
Siam	28,051
Java and Madura	57,488
Sumatra East Coast	78,325
Other Netherland East Indies	139,090
French Indo-China	29,195
Papua	1,078*
Philippine Islands	389*
Amazon Valley	57,565
Other America	11,125
Guayule (Mexico)	459
Africa	4,716*
Total	864,366

* Subject to revision

In the consumption of rubber, the United Kingdom retained second position with 99,556 long tons, a drop of about 10,000 tons from 1934. Japan also showed a similar decline, from 69,905 tons in 1934 to 57,565 tons. Consequently, Germany rose to the third consuming nation with 62,899 long tons (59,330 in 1934). The rubber absorption of these and other nations in 1935, as furnished by the U.S. Department of Commerce, is shown in the accompanying table.

WORLD RUBBER ABSORPTION, 1935

Consumption	
Long tons	Long tons
United States .. 505,160	United Kingdom .. 99,556
Net imports	
Australia .. 9,978	Italy .. 21,917*
Austria .. 3,566*	Japan .. 57,565
Belgium .. 7,019*	Netherlands .. 4,077
Canada .. 26,870	Norway .. 1,353
Czechoslovakia .. 11,226	Russia .. 37,666*
Denmark .. 3,258	Spain .. 8,138*
Finland .. 2,388	Sweden .. 4,879
France .. 51,450	Switzerland .. 1,463
Germany .. 62,899	Others .. 36,000*
Total ..	956,428
Minus United States Consumption ..	505,160
Foreign ..	451,268

* Subject to revision

PNEUMATIC CASINGS, TUBES, SOLID TIRES

	Production		Shipments	
	1935	1934	1935	1934
Balloon Casings ..	43,944,241	40,632,050	44,772,245	40,171,288
High Pressure Casings ..	3,936,689	5,183,713	4,073,421	5,114,667
Total Casings ..	47,880,930	45,815,763	48,845,666	45,285,955
Balloon Inner Tubes ..	42,830,162	39,113,104	42,990,390	37,987,646
High Pressure Inner tubes ..	3,612,502	5,727,867	3,802,538	5,706,484
Total Inner Tubes ..	46,442,664	44,840,971	46,792,928	43,694,130
Solids & Cushions ..	282,647	197,497	274,837	187,152

The production and shipment of pneumatic casings, tubes, and solid tires in the United States during 1935, compiled by the Rubber Manufacturers Association, and covering approximately 97 per cent of the industry, as compared with a similar record for 1934, is shown on page 648.

The rubber consumption in tires and tire sundries in 1935 totaled 325,280 long tons, or exactly 6000 tons less than in 1934. The sales value of the finished products, however, rose to \$339,562,000 as against \$317,996,000 in 1934.

Again in 1935 the consumption of rubber in the United States exceeded the consumption in the previous year in the manufacture of products other than tires, as reported by the same statistical bureau. These lines, detailed in the following table, consumed 95,565 long tons, as compared with 89,309 long tons in 1934, and the sales value of the manufactured products totaled \$214,600,000 as compared with \$202,483,000 in 1934.

CRUDE RUBBER CONSUMED IN OTHER RUBBER PRODUCTS IN THE U.S. (LONG TONS)

	1935	1934
Mechanical Rubber Goods	38,887	33,183
Boots and Shoes	18,239	18,473
Insulated Wire and Cable Compounds	4,679	3,429
Druggist Sundries, Medical and Surgical Rubber Goods	3,421	3,253
Stationers' Rubber Goods	1,680	1,580
Bathing Apparel	789	1,252
Miscellaneous Rubber Sundries	3,215	3,268
Rubber Clothing	1,020	734
Automobile Fabrics	656	1,164
Other Rubberized Fabrics	4,075	4,397
Hard Rubber Goods	2,038	2,047
Heels and Soles	10,271	12,117
Rubber Flooring	780	789
Sponge Rubber	3,662	1,636
Sporting Goods, Toys, and Novelties	2,151	1,987
Total	95,565	89,309

RUMANIA. A constitutional monarchy of southeastern Europe. Capital, Bucharest. Reigning sovereign in 1935, Carol II.

Area and Population. With an area of 113,887 square miles, Rumania had an estimated population on Jan. 1, 1934, of 18,791,637 (1930 census, 18,057,074). Living births in 1933 numbered 597,621; deaths, 348,085; marriages, 155,049. Populations of the chief cities in 1930 were: Bucharest (Bucuresti), 631,288; Chisinau (Kishinev), 117,016; Cernauti (Czernowitz), 111,147; Iasi (Jassy), 102,595; Galati, 101,148; Cluj (Klausenburg), 98,569; Timisoara, 91,866; Oradea-Mare (Grosswardein), 82,355; Ploesti, 77,325; Arad, 77,225. The religious division of the population in 1934 was: Orthodox, 13,300,000; Greek Catholics, 1,800,000; Roman Catholics, 1,200,000; Reformists, 720,000; Lutherans, 400,000; Unitarians, 75,000; Jews, 900,000; Moslems, 260,000.

Education. Primary education is nominally free and compulsory but a large percentage of the population is illiterate. School attendance in 1931-32 was: Elementary, 1,795,037; secondary, 145,580; university, 35,980. There are universities at Bucharest, Iasi, Cluj, and Cernauti.

Production. Three-fourths of the people are engaged in agriculture. In 1934 33,154,000 acres (45 per cent of the total) was suitable for cultivation, 9,615,000 acres were under pasture, 1,390,000 acres devoted to trees and shrubs, and 15,934,000 acres were forest land. Yields of the chief crops in 1934 were (in thousands of units): Wheat, 76,553 bu.; rye, 8308 bu.; barley, 40,021 bu.; oats, 38,806 bu.; corn, 188,969 bu.; potatoes, 70,610 bu.; sugar beets, 650 metric tons; beet sugar (1934-35), 118 metric tons; wine, 213,978 gal. In 1932 there

were 4,187,000 cattle, 12,317,000 sheep, 2,965,000 swine, 421,000 goats, 2,031,000 horses, mules and asses, and 195,000 buffaloes.

Mineral production in 1934 was (in 1000 metric tons): Coal, 277; lignite, 1611; petroleum, 8467. In 1933 the output of other minerals was: Natural gas, 52,968,000,000 cu. ft.; salt, 612,892,000 lb.; iron ore, 13,831 metric tons, gold, 142,585 troy oz.; silver, 353,489 troy oz.; pig iron, 2024 metric tons, copper, 453,205 lb. In 1932 there were 3524 industrial establishments employing 132,389 laborers and 19,920 technical and administrative employees. Flour milling, brewing, and distilling were the most important lines.

Foreign Trade. Imports for consumption in 1934 were valued at 13,095,971,000 lei (11,592,204,000 in 1933) and exports at 13,612,988,000 lei (14,101,342,000 in 1933). Leading imports in 1934 (in 1000 gold dollars) were: Vegetable textiles and derivatives, 22,016; iron and iron products, 11,648; apparatus, machinery, and motors, 8253; wool, hairs, and articles thereof, 6678; chemical products and medicines, 3513; fruits and colonial products, 3003. The chief exports were (in 1000 gold dollars): Coal, lignite, petroleum, and derivatives, 43,000; cereals and their products, 14,180; wood and derivatives, 8723; live animals, 3745; plant seeds, 3733; animal foodstuffs, 2323. Of the 1934 imports the United Kingdom supplied 16.2 per cent; Germany, 15.5; France, 11.2; Austria, 10; Czechoslovakia, 9.9; Italy, 7.3. Germany took 16.6 per cent of the exports; United Kingdom, 10; France, 9.7, Austria, 9; Italy, 7.8.

Imports in 1935 totaled 10,611,600,000 lei; exports, 16,650,000,000 lei. Imports from the United States were \$2,985,423; exports to the United States, \$1,097,992.

Finance. Preliminary budget returns for the fiscal year ended Mar. 31, 1935, showed receipts of 18,809,300,000 lei and expenditures of 19,845,100,000 lei. This compared with 1933-34 receipts of 18,364,000,000 and expenditures of 20,361,000,000 lei. The public debt as of Mar. 31, 1935, was estimated at 99,700,000,000 lei (internal, 19,300,000,000, external, 80,400,000,000). The leu (par value, \$0.0101 in 1935) exchanged at an average of \$0.00597 in 1932, \$0.0078 in 1933, \$0.01001 in 1934, and \$0.0093 in 1935.

Communications. Rumania in 1934 had 6965 miles of state-owned railway lines, 79,176 miles of highways; and air lines connecting Bucharest with the other European capitals. The railways in 1934 carried 27,232,000 passengers and 19,332,000 metric tons of freight, earning gross receipts of 8,217,000,000 lei. The net tonnage of vessels with cargo and in ballast entering Rumanian ports in the overseas trade in 1934 was 6,937,000 (7,817,000 in 1933).

Government. The constitution of Mar. 28, 1923, vested executive power in the King and a council of ministers, the King having a suspensive veto over laws passed by parliament. Legislative power rested in a parliament of two chambers—a chamber of deputies, with 387 elected members, and a senate of 200 elected and about 50 *ex officio* and appointed members. The term of elected deputies and senators was four years. Prenner at the beginning of 1935, George Tatarescu, appointed Oct. 4, 1934.

History. Domestic Affairs. The course of domestic politics ran relatively smoothly during 1935. Premier George Tatarescu's National Liberal Ministry remained in office throughout the year without facing a serious threat to its power. Some significant trends became apparent among

the political parties, but produced no immediate repercussions in governmental affairs. Early in the year the People's party led by Gen. Alexander Averescu and the Liberal faction under George Bratianu which seceded from the National Liberals in 1930 united in opposition to the government and to King Carol's personal rule. The powerful National Peasant party underwent a reorganization in which former Premier Julius Maniu and his adherents were apparently relegated to a less influential position. Later in the year former Premier Vaida-Voevod and a small group of followers withdrew from the National Peasant party and formed a separate organization. Another change was the absorption of Professor Cuza's violently anti-Semitic National Christian Defence League into the Agrarian party led by O. Goga, and the merging of Vaida-Voevod's group with them on November 30. The Rumanian National Fascist party was reported to have gained ground rapidly during the year. Clashes between the police and Fascists occurred in Bucharest with increasing frequency.

As in previous years since Carol's return to the throne, the major cause of political unrest was the dominance at court of a camarilla headed by Mme. Magda Lupescu, the Jewish mistress of the King. The National Peasant party in particular continued its efforts to drive Mme. Lupescu from Rumania. At a nation-wide party rally in Brasov on June 17 Dr. Maniu warned the King that his refusal to part with his mistress directly endangered his throne. At this and other meetings, Mme. Lupescu was charged with responsibility for the continued censorship, the martial law in effect in numerous cities, and the strangle hold of the palace clique upon national affairs and government positions. Her brother, Jorgu Mileteanu, was head of the state health and insurance organization and it was charged that numerous other relatives and a disproportionate number of Jews had obtained government posts. The attacks by the National Peasants were seconded by General Averescu and George Bratianu and their adherents, but without making any noticeable impression upon Carol.

A new scandal arose in Bucharest during the year over revelations of wholesale fraud and corruption in connection with rearmament contracts awarded the French-controlled Skoda armament firm. A report issued by a parliamentary commission following an investigation indicated that exorbitant prices were paid for the arms procured, that large sums were diverted to Rumanian officials, and that incriminating documents had been hidden or destroyed by highly placed members of the government. The Chamber of Deputies on March 27 approved a resolution for the indictment of two former Ministers—General Cihosky and Mihai Popovici, former Minister of Justice.

Economic Developments. The economic situation went from bad to worse during 1935. The small favorable trade balance made it increasingly difficult during the first months of the year to meet debt and other payments abroad. The increase in the cost of living and the large budget deficit led to demands for inflation from many quarters. In the spring the Finance Minister was granted additional power to control foreign trade through the restriction of imports and the encouragement of exports. Late in May a new system of exchange regulations and trade control was announced with these ends in view, effective June 11. The National Bank assumed strict con-

trol of all foreign exchange transactions and funds for the subsidization of exports were raised by collecting import premiums or taxes on exchange released to importers to pay for goods entering the country. Imports were continued on a quota basis, subject to permits issued by the Ministry of Industry and Commerce.

During June and July settlement of obligations abroad almost ceased. The National Bank released very little foreign exchange to pay for imports and practically none at all to pay creditors in the United States. Imports from the United States, Japan, Norway, and Latvia, which normally sold Rumania much more than they purchased from her, were drastically curtailed. Even those countries buying more from Rumania than they sold to her had difficulty collecting payments for goods and securing the servicing of Rumanian bonds. Great Britain in February reached an agreement with the Rumanian Government for the progressive liquidation of outstanding Rumanian trade debts to British merchants, which aggregated £2,500,000 on Nov. 1, 1934. In August Rumania agreed to set aside 30 per cent of her surplus foreign exchange arising from Anglo-Rumanian trade for payment of interest on British-owned Rumanian bonds. In October, however, Rumania defaulted on the current service of her debt to British bondholders. Nevertheless, as a result of the new foreign trade controls, the excess of exports over imports mounted to approximately 6,038,400,000 lei in 1935 from 447,600,000 lei in 1934. For Rumania's default on war debts to the United States, see REPARATIONS AND WAR DEBTS.

Foreign Relations. As a member of both the Balkan Entente (q.v.) and the Little Entente (q.v.), Rumania followed the same general foreign policy during 1935 as the other associated States. The major aim of both these combinations was to preserve the territorial gains won during the World War. In 1935 this aim was menaced more directly than ever before by the revival of German military power and the growing danger that Hungary and possibly Poland and Bulgaria would join forces with the Reich in overthrowing the peace treaties. To counter-balance the growing power of Germany, the Little Entente and Balkan States turned to ever closer collaboration with the Soviet Union. Czechoslovakia concluded a mutual assistance pact with Moscow, which received the approval of both Rumania and Yugoslavia before it was signed. Negotiations for a similar pact between Rumania and the U.S.S.R. were reported to be practically completed by the end of 1935. The importance of this treaty was that it would doubtless enable Soviet troops and aeroplanes to pass over Rumanian territory to go to the defense of Czechoslovakia in case of a German attack upon the latter republic.

The Soviet Government sought to further the friendly associations inaugurated with the restoration of Rumanian-Russian diplomatic relations on June 9, 1934. In June, 1935, the Moscow authorities returned to Rumania the Rumanian treasures and archives which had been sent to Russia for safekeeping during the World War. In October the Soviet Government reiterated its pledge to abandon its claim to Bessarabia, former Russian territory incorporated in Rumania after the World War. Opposition to a pro-Soviet foreign policy continued in certain influential Rumanian circles, however. Persistent Communist agitation did nothing to calm these apprehensions. In May the Rumanian police arrested 50 alleged Communists

and seized two printing establishments, containing much propagandist literature. Fascist organizations in Rumania were openly urging an alliance with Germany and the complete repudiation of the system of alliances built up since the World War.

The concentration of Bulgarian troops along the Greek border during the Greek civil war of March, 1935, led Foreign Minister Titulescu of Rumania to join with Turkey in warning Bulgaria against any interference in Greek affairs. In July the Rumanian Foreign Minister again took the lead, following the abrogation of the anti-Hapsburg laws in Austria, in warning the Austrian Government that restoration of the Hapsburg dynasty would mean mobilization of the Little Entente armies. Prince Paul, chief regent of Yugoslavia, visited King Carol on July 12-13, 1935, and was reported to have discussed with the King and Foreign Minister Titulescu the policy to be followed with respect to the Russo-Czechoslovak pact and the prospective restoration of the Hapsburgs. With the outbreak of the European crisis over Ethiopia in September and October, Rumania joined with the Little Entente and Balkan Entente in supporting the application of League sanctions against Italy and in promising military support to Great Britain in case of an Italian attack upon the British fleet in the Mediterranean. Meanwhile the rearmament of Rumania was pushed forward as rapidly as possible, despite the precarious condition of the country's finances.

See AUSTRIA, BULGARIA, CZECHOSLOVAKIA, ETHIOPIA, GERMANY, GREAT BRITAIN, GREECE, HUNGARY, ITALY, TURKEY, UNION OF SOVIET SOCIALIST REPUBLICS, and YUGOSLAVIA under *History*.

RUSSELL, GEORGE WILLIAM ("AE"). An Irish poet and economist, died at Bournemouth, England, July 17, 1935. Born in Lurgan, County Armagh, Ireland, Apr. 10, 1867, he attended Rathmines School in Dublin and then entered an accountant's office, when for a time he contributed to and edited a privately published monthly called *The Theosophist*. At this time he adopted the signature "AE," which was due to the difficulty on the part of the printer in reading the word "aeon," which he had affixed to one of his poems. At first it was his intention to use this only in connection with his literary works, but later he used it to sign all his work.

The agricultural situation of his country soon engaged his interest, and in 1897, through his friendship with W. B. Yeats, he joined Sir Horace Plunkett's Irish Agricultural Organization. He soon became indispensable as an organizer and orator, and in 1904 was appointed editor of *The Irish Homestead*, the organ of the agricultural movement. In 1923 when the magazine merged with *The Irish Statesman*, he became its editor, and served until 1930 when the publication went out of existence. During 1917-18 he was a member of the Irish Convention. In connection with the coöperative movement in Ireland, he wrote several pamphlets, the chief being *Coöperation and Nationality* (1912) and *The Rural Community* (1913), which were developed more fully in *The National Being; Thoughts on an Irish Policy* (1917).

His first poetical work, *Homeward; Songs by the Way* appeared in 1894 and his next, *The Earth Breath* in 1897. He himself in the "Preface" to *Collected Poems* (1913) gives an account of his work when he says, "When I first discovered

for myself how near was the King in His beauty, I thought I would be the singer of the happiest songs. . . . I have found it easier to read the mystery told in tears and understood Thee better in sorrow than in joy . . ." (by permission of The Macmillan Company, publishers). Himself by nature a mystic, it was inevitable that his work would be influenced by the legend and folklore of his native land.

His works were not devoted solely to poetry. In collaboration he wrote *Literary Ideals in Ireland* (1899) and *Ideals in Ireland* (1901). His three act drama in prose, *Deirdre* (1907), was produced by the Abbey Theatre, Dublin, of which he was one of the founders. Other of his non-poetical works include *The Mask of Apollo* (1904), a collection of tales; *Irish Essays* (1906); *Imaginations and Reveries* (1915); *The Avatars* (1933), a futurist fantasy. Representative of his poetical work are *The Divine Vision* (1904); *New Poems* (1904); *By Still Waters* (1906); *Collected Poems* (1913); *The Candle of Vision* (1919); *Midsummer Eve* (1928); *Dark Weeping* (1929); *Vale and Other Poems* (1931); *Song and Its Fountains* (1932); *House of the Titans and Other Poems* (1934); *Selected Poems* (1935). With his death, one of the last of the founders of the Celtic twilight cult of Irish literature is gone.

RUSSELL SAGE FOUNDATION. The Russell Sage Foundation was created by Mrs. Russell Sage in 1907, very shortly after the death of her husband, for whom she desired to create a memorial. As set forth in its charter, the Foundation was organized "for the purpose of receiving and maintaining a fund, or funds, and applying the income thereof to the improvement of social and living conditions in the United States of America." The original memorial fund amounted to \$10,000,000, which was increased by the sum of \$5,000,000 left by Mrs. Sage in her will.

The Foundation not only endeavors to avoid duplicating work already being done by other agencies, but frequently turns over to subsequently set up organizations activities which it has been instrumental in organizing, when it believes that such transfer will work to the greater advancement of that particular type of work. Under this policy it has from time to time encouraged several of its departments to become independent units, and it has filled such vacancies with other departments or activities in fields which at the time seemed to be neglected.

Its departments are largely engaged in various types of research pertaining fundamentally to the aim of the Foundation to better social and living conditions, and in making the results of such study and its interpretation available to others. The information thus obtained is communicated to the public, and particularly to those to whom it will be most serviceable, through publications, lectures, addresses, courses of instruction, conferences, and such various other methods as will most contribute to the advancement of knowledge in the welfare field and best stimulate public and private action for social betterment.

The departmental work of the Foundation is in normal times classified chiefly under the heads of family welfare and charity organization, industrial relations, handicrafts, library on social work and social conditions and problems, recreation and community centres, remedial loans and consumers credit, social statistics, social service and relief, social surveys, social work interpretation, social work year book, publications, a limited service on

matters concerning delinquency and penology, and general administration.

During the emergency period of the last few years a great deal of the normal work of the Foundation staff has been suspended and attention centred upon the study and solution of problems brought on by unemployment and its attendant depression. These emergency activities have been concerned with such matters as the collection, study and communication to the public of information as to outstanding pieces of work in organizing and administering relief; the study and evaluation of various State emergency relief administrations; assistance personally and by publication, in planning educational campaigns to interest and inform the public regarding the needs of the unemployed and methods of cooperation in helping them; the study of the relation of workers organizations to management, especially as affected by governmental action; improvement of public statistics relating to employment; the systematic collection of statistics of relief work in the United States; experimental studies in cities on the amount and distribution of unemployment, in an effort to develop more effective survey methods for use in other similar localities; the study of consumer debt in its relation to the depression borrower; in acting as a centre of information and guidance on recreational studies and projects developed for the utilization of leisure time; and in encouraging all efforts to direct the activities of those with enforced spare time into wholesome and educational channels. This past year the Foundation devoted approximately half of its income in support of other agencies in similar fields.

The trustees and officers of the Foundation are as follows: Lawson Purdy, vice-president and treasurer; John M. Glenn, secretary; Lindsay Bradford, Joseph P. Chamberlain, Johnston de Forest, Frederic A. Delano, John H. Finley, Morris Hadley, Mrs. Frederic S. Lee, Mrs. Finley J. Shepard, and Harold T. White. Shelby M. Harrison is general director. Offices are maintained at 130 East 22d Street, New York City.

RUSSIAN SOCIALIST FEDERATED SOVIET REPUBLICS. See UNION OF SOVIET SOCIALIST REPUBLICS

RUTGERS UNIVERSITY. A nonsectarian institution of higher learning in New Brunswick, N. J., founded under the name of Queen's College in 1766. The university consists of the following schools and colleges: Arts and sciences, engineering, agriculture, pharmacy, chemistry, education, New Jersey College for Women, and University College. The registration for the autumn of 1935 was 2550, of whom 964 were enrolled in the college for women. Of the 299 members of the faculty 182 were professors and 117 instructors. The endowment funds amounted to \$4,271,524, and the income for the year, exclusive of the State agricultural experiment station, was \$2,630,516. The library contained 200,000 volumes. President, Robert C. Clothier, LL.D.

RUTHENIA. See CZECHOSLOVAKIA.

RYE. The 1935 rye crop of 26 countries reporting to the International Institute of Agriculture, not including the Soviet Republics and the countries of the southern hemisphere, was estimated at 934,735,000 bu. which was 2.8 per cent above their production in 1934 and 2.4 per cent below the average for the five years 1929-33. The acreage of these countries, 45,587,000 acres, was 5.1 per cent above the area in 1934 and .2 per cent above the average for the five-year period. The production

of the leading countries other than the United States was estimated as follows: Germany 297,-362,000 bu., Poland 251,246,000 bu., Czechoslovakia 64,502,000 bu., and France 29,981,000 bu. The Soviet Republics reported a yield of 792,488,000 bu. in 1934 and Argentina, the leading rye producing country of South America, a yield of 15,787,000 bu. in the crop-year 1934-35.

According to the Department of Agriculture the 1935 production of 57,936,000 bu. in the United States was the largest rye crop the country produced since 1924. This crop was about 42,000,000 bu. above the crop of 16,045,000 bu. in 1934. The 1935 acreage of 4,063,000 acres compared with 1,942,000 acres the year before. The area harvested in 1935 was increased in all North Central States, especially in Minnesota, the Dakotas, and Nebraska. The 1935 yields per acre were above average in all main rye producing States, the yields per acre for the entire country being 14.3 bu. compared with 8.3 bu. in 1934 and 12.2 bu., the average for the 10 years 1923-32. The average farm price for the early part of the 1935 marketing season was 38.4 cents per bu. compared with 71.3 cents for the marketing season of 1934. At these prices the total value of the 1935 crop was \$22,248,000 and of the 1934 crop \$11,445,000. The yields of the leading States were reported as follows: North Dakota 12,754,000 bu., Minnesota 9,900,000 bu., Nebraska 7,250,000 bu., and South Dakota 7,050,000 bu. Exports of rye from the U.S.A. in the fiscal year ended June 30, 1935, were negligible in quantity and the imports amounted to 5,864,000 bu.

SAAR. A part of the German Rhineland, the administration of which was transferred to the League of Nations for 15 years by the Treaty of Versailles. By the same treaty the Saar coal mines were ceded outright to France as compensation for war damages. With an area of 738 square miles and a population of 828,128 (1934), the Saar comprised one of the most important coal and steel producing regions of Europe. The 1934 output, in 1000 metric tons, was: Coal, 11,316; pig iron, 1824; steel ingots and castings, 1944.

The Saar was governed from 1920 to Mar. 1, 1935, by a commission of five members appointed for one year by the Council of the League of Nations. After extensive preparations during 1934 (see the NEW INTERNATIONAL YEAR BOOK for 1934, p. 635-636), the plebiscite called for by the Treaty of Versailles to determine the future of the Saar was held on Jan. 13, 1935. Out of 525,756 valid votes, 477,119 favored reincorporation in Germany, 46,513 continuation of the League régime, and 2124 annexation to France. Despite the extreme tension generated by the campaign, the voting was orderly and freedom of the ballot was insured by the Plebiscite Commission's elaborate precautions, supported by an international army of 3300 British, Italian, and Swedish troops.

Following Germany's overwhelming victory, the League Council on January 17 awarded the entire territory to the Reich and the transfer took place on March 1 amid the delirious rejoicing of the Saar population. The crisis in Franco-German relations produced by the Saar question in 1934 was thus peacefully liquidated. Meanwhile some 10,000 Saar Communists, Jews, and Catholics fled to France to escape Nazi vengeance for their anti-Nazi activities during the plebiscite campaign. The transfer of mines, railways, customs houses, state properties, etc., took place in accordance with an agreement

reached between German, French, and League representatives at Naples on February 18. Upon the insistence of France, the Reich agreed to demilitarization of the territory.

Administration of the territory was taken over by Joseph Buerckel, whom Chancellor Hitler appointed Reich Commissioner for the Saar. To prevent a violent disturbance of the Saar's economic life, Herr Buerckel temporarily restricted trade between the Saar and the rest of Germany in food and certain other commodities while arranging for increased German purchases of Saar coal. Despite these precautions the cost of living in the Saar showed a substantial increase under German rule, producing some discontent among the Saarlanders. See *GERMANY under History*.

SAGHALIEN. See **SAKHALIN**; **KARAFUTO**.

ST. CHRISTOPHER-NEVIS. See **LEEWARD ISLANDS**.

ST. HELENA. A British colony in the South Atlantic, consisting of the island of St. Helena (47 sq. m.) and its dependency the island of Ascension (34 sq. m.). Population (Jan. 1, 1935), 4412 (of whom 173 were on Ascension) compared with 4183 (1931 census). Jamestown, the capital, had 1381 inhabitants in 1931. The production of hemp fibre was the chief industry. In 1934, total imports were valued at £33,476; total exports, £8949; revenue (including a £2500 grant from the British Treasury), £24,474; expenditure, £23,792; public debt, nil. The colony was administered by a governor, assisted by an executive council. Governor, Sir S. S. Davis.

ST. JOHN'S COLLEGE. A college of liberal arts and sciences for men in Annapolis, Md., founded as King William's School in 1696. The enrollment for the first half-year of 1935-36 was 269. There are 26 faculty members. The endowment fund as of June 30, 1935, amounted to \$211,579.68, and the income for the year was \$244,600. The library contained 30,011 volumes. President, Amos W. W. Woodcock, LL.D.

ST. LAWRENCE UNIVERSITY. An institution for the higher education of men and women at Canton, N. Y., founded in 1856. The registration for the autumn term of 1935 was 681. For the Summer session of 1935, 210. The faculty numbered 54 members. The endowment funds amounted to \$5,059,453, and the income for the year was \$225,908. The law school of the University is located in Brooklyn, N. Y. Its enrollment for the autumn term of 1935 was 1155. The library contained approximately 63,000 volumes. President, Laurens Hickok Seelye, M.A., LL.D.

ST. LOUIS. See **MUSIC**.

ST. LUCIA. A British colony in the Windward Islands group of the British West Indies. Area, 233 sq. miles; population (Jan. 1, 1935), 63,800. Port Castries, the capital, was an important coaling station and 314 steamships (aggregating 896,828 tons) entered the harbor in 1934. Sugar, limes, rum, cacao, copra, and logwood were the main products. In 1934, imports were valued at £169,439; exports, £133,986; revenue, £85,079; expenditure, £90,953; public debt, £120,366. St. Lucia was under the governor of the Windward Islands but it had its own legislative council. See **WINDWARD ISLANDS**.

ST. PIERRE AND MIQUELON (mīk'ē-lōn'). The main islands in two small groups, near the south shore of Newfoundland, owned by France. Area of St. Pierre group, 10 sq. miles; Miquelon group, 83 sq. miles. Total population (1931), 4321. Capital, St. Pierre. Cod fishing was

the principal industry. In 1933, imports were valued at 115,000,000 francs; exports, 138,000,000 francs. The budget for 1934 was balanced at 8,370,260 francs (franc averaged \$0.0657 for 1934; \$0.0501 for 1933). In October, 1935, the islands were granted a greater measure of autonomy, including control of local affairs by an elected council of 12.

ST. THOMAS. See **SÃO THOMÉ AND PRINCE**; **VIRGIN ISLANDS**.

ST. VINCENT. A British island colony in the Windward Islands group of the West Indies. Area, 150.3 sq. miles; population (1934 estimate), 53,622 compared with 47,961 (1931 census). Kingstown, the capital, had 4269 inhabitants in 1931. In 1934 the 37 primary schools had 9413 pupils enrolled; the 2 secondary schools had 147 pupils enrolled.

Production and Trade. Arrowroot, coconuts, cotton, sweet potatoes, cassava, plantains, sirup, and sugar were the main products. The 1934 estimated production of arrowroot amounted to 3432 short tons valued at £78,000. An area of 230 acres planted with bananas during 1934 was expected to be producing during 1935. In 1934, total imports were valued at £163,035; total exports, £135,229.

Government. For 1934, revenue amounted to £77,819; expenditure, £73,761; public debt, £91,923 against which the sinking funds totaled £7477. St. Vincent was under the Governor of the Windward Islands but had its own executive and legislative councils. The islands of the Lesser Grenadines (Mayreau, Canouan, Union Island, Mustique, and Bequia) were administered from St. Vincent. See **WINDWARD ISLANDS**.

History. On Oct. 21, 1935, rioting broke out at Kingstown after a mass demonstration of striking Negro laborers. The Riot Act was read and the police were compelled to open fire on the rioters when they attacked the police, looted stores and houses, and destroyed highways. Three rioters were killed. The injured included the chief of police, the prison warden, six policemen, and over 20 rioters. Order was restored on October 23 with the aid of armed sailors landed from the British warship *Challenger* but the town was continued under martial law. An anti-rioting law passed by the legislative council became law on Nov. 16, 1935. Violators were made liable to a \$5000 fine and two years in jail, and the police were given power to enter buildings under warrant to search for prohibited publications.

SAKDALISTS. See **PHILIPPINES** under *History*.

SAKHALIN, sa'ka-lēn'. An island off the east coast of Siberia. The area north of 50° N. is a district of the Far Eastern Area of the U.S.S.R. Area, 14,663 sq. miles; population, 39,400. Capital, Aleksandrovsk-Sakhalinski (8100 inhabitants). Fish, oil, and lumber were the principal products. For the Japanese part of the island see **KARAFUTO**.

SALAMANCA, DANIEL. A Bolivian statesman, died at La Paz, Bolivia, July 17, 1935. He was born at Cochabamba, July 8, 1869, and was educated at the University of San Simeon in his native town. While still a student, he became the University secretary, and subsequently taught political economy, finance, and statistics there.

His first entry into public life was made in 1900 when he was elected a National Deputy. Three years later he was appointed Minister of Finance and Industry in the cabinet of President Pando, and in the following year led an unsuccessful fight in the Senate against the ratification of the treaty with Chile, whereby Bolivia lost its strip of the Pacific

Coast. Also, he was a member of the opposition to the foreign railroad building concession in 1906 and was again unsuccessful. The year 1910 saw him in Europe and the United States on financial missions.

In 1914, Salamanca sponsored a new party, the Union Republicans, but inasmuch as President Montes declared martial law, its formation was prevented. However, it subsequently came into existence and out of it grew the revolution of 1920 which put Bautista Saavedra in the presidential chair. Party politics and ill health now caused Salamanca to resign his senatorship, and from 1924 to 1930 he taught at his old University until the coup of the rebel forces on June 19 of the latter year led him to the presidency.

In January, 1931, he was elected president of Bolivia and from the start his régime was faced with overwhelming financial difficulties, and the revival of party and regional dispute. Notwithstanding these difficulties, the first part of his administration enhanced his reputation for integrity and ability. Less than 17 months after he had taken over the Government, the Paraguay-Bolivia War broke out, and he recalled Hans Kundt, the German trainer of Bolivian forces, from exile to command the troops. By 1932 conditions were such that Salamanca offered to delegate his powers to a Coalition Government, but the various factions, not wishing to be held responsible for the outcome of the War, could not agree. By 1934, however, dissatisfaction with his conduct of the war and his efforts to finance the war without asking any outside assistance, as well as the condition of his health, led him to resign on November 27. He retired to Cochabamba and began his memoirs and a history of the Chaco War.

SALVADOR, EL (ĕl sal'va-dōr'). A republic of Central America. Capital, San Salvador.

Area and Population. The smallest and most densely populated of the Central American states, El Salvador has an area of 13,176 square miles and a population estimated on Dec. 31, 1934, at 1,574,000 (1,459,578 at the 1930 census). The bulk of the population consists of Indians and persons of mixed Spanish and Indian blood, but the small governing and educated class is largely of Spanish descent. Living births in 1934 numbered 62,727; deaths, 38,216. Populations of the chief towns in 1932 were: San Salvador, 98,555; Santa Ana, 78,321; San Miguel, 41,453; Ahuachapán, 29,520; San Vicente, 26,131. Roman Catholicism is the dominant religion.

Education. Elementary education is free and compulsory. In 1934 there were 63,284 pupils in 968 primary schools, of which 56,373 attended government schools, 1694 private schools, and 5217 municipal schools. A new three-year curriculum was introduced in the 388 rural schools in September, 1934. Secondary schools numbered 31, of which 22 offered academic and 9 commercial subjects. There were 2 normal schools and the National University (with about 500 students).

Production. About 60 per cent of the total area is under cultivation. Coffee is the chief money crop, accounting for 96 per cent of the value of all exports in 1933. The 1934-35 coffee crop was about 825,000 bags (of 152 lb.), of which 730,907 bags were shipped abroad. Henequen and sugar are the other export crops, while corn, beans, and rice are grown extensively for local consumption. Livestock in 1933 included 523,000 cattle, 358,000 swine, and 150,000 horses, mules, and asses. The forests supply hardwoods and Peruvian balsam. Some gold and silver is mined. Manufactures, designed entirely for

local consumption, are principally cheap cotton cloth, stockings, hats, soap, beverages, and tobacco products.

Foreign Trade. According to preliminary returns, imports in 1934 were valued at 20,475,000 colones (15,265,000 in 1933) and exports totaled 24,049,000 colones (20,296,000 in 1933). Coffee exports in 1934 totaled 49,866 metric tons, valued at 22,824,000 colones (56,189 tons, valued at 19,512,000 colones, in 1933). Of the 1934 imports the United States supplied 44.5 per cent; United Kingdom, 13.3; Japan, 11.1; and Germany, 8.3. Germany took 30.5 per cent of the 1934 exports; United States, 26.9; The Netherlands, 9.4. Cotton cloth, wheat flour, and iron and steel manufactures were the chief imports.

Finance. Revenues and expenditures in the fiscal year ended June 30, 1935, were 21,956,000 and 19,840,000 colones, respectively, leaving a surplus of 2,116,000 colones. Budget estimates for 1935-36 were: Revenues, 21,073,000 colones; expenditures, 20,790,000 colones. The public debt as of June 30, 1935, was 46,072,000 colones (external, 38,318,000; internal, 7,754,000). The colon exchanged at an average of about \$0.38 in 1934, and \$0.3424 in 1933.

Communications. El Salvador in 1934 had about 378 miles of narrow-gauge railways, 1475 miles of highways (including 350 miles passable to motor cars), and air lines linking San Salvador with Tegucigalpa, Guatemala City, and with the Pan American Airways network. Cutuco is the chief port. Telephone connections between El Salvador and Guatemala were established for the first time on Sept. 15, 1935.

Government. The Constitution vests executive power in a president elected for four years and legislative power in a single chamber of 42 deputies elected for one year by popular suffrage. Provisional President Maximiliano H. Martínez, who seized power by a coup d'état on Dec. 2, 1931, was declared constitutional president by Congress on Feb. 5, 1932, and was reelected in 1935.

History. Gen. Maximiliano H. Martínez insured the perpetuation of his dictatorship for another four years by securing reelection to the presidency on Jan. 13-15, 1935. Both General Martínez and his running mate, Gen. Andrés Menéndez, were unopposed. They were inaugurated as President and Vice President, respectively, on March 1. While the elections took place without disorder under the supervision of Martínez's well-equipped army, and the President showed confidence in his strength by permitting former President A. Quinones to return from exile, evidences of deep unrest manifested themselves despite the strict censorship. On Oct. 9, 1935, the government proclaimed a state of siege throughout the country and announced that it had crushed another revolutionary plot. Twenty-six of the alleged conspirators were executed on October 13, according to a Panama City dispatch to the *New York Times*.

In a radio address of January 16, President Martínez outlined his programme for the ensuing term as follows: Strict honesty in the administration of government finances; construction of public highways and public buildings; promotion of public education and social betterment; purification of public justice; improvement of sanitation facilities; aid for business and agriculture through the central and mortgage banks. In preparation for the calling of a constitutional convention to revise the fundamental law, Congress appointed a commission to study needed constitutional reforms. As a result of the budget surplus in 1934-35, the government in

July reduced the export tax on coffee from \$2.57 to \$0.82 per 100 kilos for the period of one year. In September aid was extended to business in the form of a moratorium law covering real-estate mortgages negotiated prior to Mar. 12, 1932, the date of the first moratorium law. Negotiations for a permanent agreement on the service of the foreign debt were continued during 1935 with several bondholders committees in the United States.

Travelers in Central America during the year reported that trouble appeared to be brewing between El Salvador and Guatemala, due to friction over boundary issues and the ambition of President Jorge Ubico of Guatemala to reestablish the Central American Union, with himself in the dominant rôle. Clashes between Guatemalan and Salvadorean troops were reported along the border and diplomatic relations were said to have been virtually severed.

SALVATION ARMY, THE. A world-wide organization with international headquarters at 101 Queen Victoria Street, London, England, whose purpose is the salvation of mankind from all forms of distress—spiritual, moral, and temporal. The movement was first organized as a mission in the East End of London in 1865 by William Booth, a minister of the New Connexion Methodists. It spread rapidly throughout England and in 1880, as the Salvation Army, was extended to the United States. American incorporation took place in New York City in 1899. The government is military in character with General Evangeline Booth as international head. The higher command is divided into territories, each territory usually being a separate country, or colony, led by a commissioner, and subdivided into divisions consisting of corps, posts, and institutions under the direction of officers of varying ranks. There are four such territories in the United States.

The doctrine of the Salvation Army is a simple evangelical creed based on the Methodism from whence it came. It does not concern itself with fine theological differences, but bases its activities on the belief that "They serve God best who serve their fellowmen."

During 1935 activities were commenced in two new areas—the Malay Peninsula and the British Colony of Uganda, making a total of ninety countries and colonies in which the Salvation Army is now at work. Operations in China, hitherto largely in the North, were extended to Canton in the South and to Mukden as a centre for Manchoukuo.

General Evangeline Booth, as a result of her observations of general conditions on a world tour of inspection, inaugurated in September an international evangelistic campaign with the slogan "The World for God" to be carried on simultaneously at all Salvation Army centres until Dec. 31, 1936.

In 1935 the Salvation Army was active in 90 countries and colonies, carrying on its work in 86 languages. There were in its service 26,204 officers and cadets, 9332 persons without rank wholly employed, 163,212 honorary local officers and bandsmen, 71,674 songsters, 34,788 corps cadets, and 16,776 corps and outposts in operation. Social welfare institutions and agencies numbered 1607, free day schools 1062, and Naval and Military Homes 32. It published 135 periodicals, with a total average circulation of 1,521,263 copies per issue.

There were in the United States in 1935, 1640 corps and outposts, 4477 officers and cadets, and 32,706 honorary local officers and bandsmen. Con-

verts during the year numbered 91,394. Social welfare institutions included 76 men's hotels and 12 residential hotels for young women, accommodating a total of 9265. Men's Social Service Centres numbered 110 with accommodation for 4188, 10 children's homes, with accommodation for 824, 35 women's homes and hospitals, with accommodation for 2528; and 2 dispensaries, which treated 10,619 patients. At Thanksgiving and Christmas free dinners were given to 468,927 persons, and toys to 281,044 children. During 1935, 7280 prisoners were assisted by the Salvation Army on discharge; 7,629,520 persons were afforded temporary relief outside social service centres and hotels; 37,863 mothers and children were given summer outings; 116,072 men and women given employment through the Army's 62 free employment bureaux, and 826 missing persons found.

The National Headquarters of the Salvation Army in the United States are at 120 West Fourteenth Street, New York City. National Secretary, Com. Edward J. Parker.

SALZBURG, PROVINCE OF. See AUSTRIA.

SAMOA. A group of 14 islands in the Southern Pacific, about 4000 miles southwest of San Francisco. The islands east of 171° W. longitude belong to the United States; those west of that line are administered by New Zealand under a mandate of the League of Nations.

American Samoa. American Samoa comprises the islands of Tutuila, Tau, Olosega, Ofu, Aunuu, and Rose Island. Swains Island is included in the administrative district of American Samoa. The total area is 76 square miles and the estimated population on June 30, 1935, was 11,313 (10,055 at the 1930 census). The Naval Station at Pago Pago is the seat of government. The population of the town and its vicinity was approximately 5000 on June 30, 1935. The harbor is considered the best in the South Seas. The school enrollment in 1934-35 was 2230. English is the medium of instruction. Copra is the only export crop, the production in 1934-35 totaling 2,783,728 lb., valued at \$46,951. The increase from 609 tons valued at \$14,090 in 1933-34 afforded much-needed economic relief to the people and the island government. Imports in 1934-35 were valued at \$137,784; exports, \$63,273. Government revenues (1934-35) were \$96,464 and expenditures \$85,862. The islands are under the jurisdiction of the U.S. Navy Department and are administered by the commandant of the naval station at Pago Pago. There is a native advisory council, called the Fono, which meets annually. An Organic Act for American Samoa was under consideration by the United States Congress. Governor in 1935, Capt. Otto C. Dowling, U.S.N.

Western Samoa. The islands under New Zealand's control are officially known as the Territory of Western Samoa. The two largest islands are Savaii and Upolu, with areas of 700 and 430 square miles, respectively. The population in 1935 totaled 53,427; in 1934 there were 3017 Europeans and half-castes, 49,048 Samoan natives, 632 Chinese laborers, and 95 other islanders. Apia, the chief port and capital, is on Upolu. The natives are Christians. The schools, most of which are conducted jointly by missionary groups and the government, enrolled over 15,000 pupils in 1934. Cacao, copra, bananas, and rubber are the chief crops. In 1934 exports were valued at £128,117 (copra, £60,654; cacao, £29,498; bananas, £35,796) and imports at £97,684. For the year ended Mar. 31, 1934, government revenues totaled £90,613 and expenditures

£89,955. There were 160 miles of highways. Acting Administrator in 1935, A. C. Turnbull.

SAN FRANCISCO. See **WATERWORKS**; **ART MUSEUMS**; **MUSIC**; **RAPID TRANSIT**; **TUNNELS**; **CALIFORNIA** under *Political and Other Events*.

SAN GABRIEL DAMS. See **DAMS**.

SANITARY ENGINEERING. See **GARBAGE AND REFUSE DISPOSAL**; **SEWERAGE AND SEWAGE TREATMENT**; **WATERWORKS AND WATER TREATMENT**.

SAN MARINO, sán má-rē'nō. An independent republic near the town of Rimini, encircled by Italian territory. Area, 38 sq. miles; population (1932), 13,948. Capital, San Marino (4000 inhabitants). The main exports were cattle, wine, and building stone. The budget estimates for 1934-35 balanced at 3,957,499 lire (lira averaged \$0.0856 in 1934; \$0.0812 during October, 1935). By the terms of a monetary convention with Italy, signed on July 15, 1935, and valid until 1938, the Royal Mint at Rome was to mint all San Marino's silver coins. Legislative power rests with a grand council of 60 members from whom 2 are appointed every six months to act as regents.

SANTO DOMINGO. See **DOMINICAN REPUBLIC**.

SAORSTAT EIREANN. See **IRISH FREE STATE**.

SÃO THOMÉ, sou'n'tō-mā', AND **PRINCÍPE**, prē'n'sē-pē. Two islands in the Gulf of Guinea, West Africa, belonging to Portugal. Area, 372 sq. miles; population (1921), 59,060. São Thomé (capital) had 3187 inhabitants.

Production and Trade. Coffee, cacao, coconuts, palm oil, and cinchona were the chief products. In 1933, imports were valued at £172,011; exports, £277,843.

Government. By a decree of May 9, 1935, the fiscal year was changed to agree with the calendar year and the budget expenditure of 9,035,237 paper escudos for the 18 months ending Dec. 31, 1936, was approved. The colony was administered by a governor.

SARAWAK, sa-ra'wak. An independent State in Borneo, under British protection. Area, 50,000 sq. miles; population, 475,000. Chief towns: Kuching, the capital (25,000 inhabitants in 1931), Sibü, and Miri. Sago, pepper, rubber, petroleum (646,655 tons exported in 1934), gold, jelutong, and cutch were the main products. In 1934, imports were valued at S\$13,959,440; exports, S\$21,458,033; revenue, S\$4,820,546; expenditure, S\$3,828,872 (Straits \$ averaged \$0.5901 for 1934). Rajah, Sir Charles V. Brooke.

SASKATCHEWAN, säs-käch'tē-wōn. A Province of Canada. Area, 251,700 sq. miles; population (1935 estimate), 978,000 compared with 921,700 (1931 census). During 1934, there were 19,715 living births, 5914 deaths, and 5519 marriages. Chief towns (with 1931 populations): Regina, the capital (53,209), Saskatoon (43,291), Moose Jaw (21,299), Prince Albert (9905).

Production. The estimated value of field crops for 1935 was \$113,122,600 (\$96,472,600 in 1934) of which wheat (132,000,000 bu.) accounted for \$79,200,000; oats (136,399,000 bu.), \$23,188,000; barley (23,722,000 bu.), \$4,744,000; potatoes, \$1,659,000; hay and clover, \$1,242,000; flaxseed, \$1,203,000; rye (5,218,000 bu.), \$1,148,000. Livestock in 1934: 1,504,500 cattle, 932,200 horses, 596,400 swine, 448,200 sheep. Fur production (1933-34): 1,541,339 pelts valued at \$1,430,834.

Mineral production (1934) was valued at \$2,977,061 of which coal (909,288 tons) represent-

ed \$1,241,130; copper (6,618,913 lb.), \$491,077; sodium sulphate (66,821 tons), \$587,986; gold (5405 fine oz.), \$186,472. In 1935, coal produced amounted to 934,096 tons valued at \$1,319,051; gold, 11,925 fine oz., \$419,641. During 1933, from the 818 factories, with 5614 workers, the net value of products was \$17,034,689.

Government. For the fiscal year ended Apr. 30, 1935, revenue amounted to \$13,686,734; expenditure, \$16,395,915; gross public debt (Sept. 30, 1935), \$182,591,692; sinking fund (Sept. 30, 1935), \$8,021,072. Budget estimates (year ending Apr. 30, 1936): revenue, \$15,624,358; expenditure, \$16,391,885.

Government was vested in a lieutenant-governor and a legislative assembly of 55 members elected for five years (50 Liberals and 5 Farmer-Laborites were elected at the Provincial general election of June 19, 1934). In the Dominion Parliament at Ottawa the Province was represented by 6 Senators (elected for life) and 21 members in the House of Commons (16 Liberal members, 2 Social Credit, 2 Cooperative Commonwealth Federation, and 1 Conservative were elected at the Dominion general election of Oct. 14, 1935). Lieutenant-Governor, H. E. Munroe; Premier, W. J. Patterson (Liberal) succeeded (on Oct. 31, 1935) James G. Gardiner who became Minister of Agriculture in the Dominion Government at Ottawa. See **CANADA** under *History*.

SAUDI ARABIA, KINGDOM OF. See under **ARABIA**.

SAULT STE. MARIE, CANALS AT. Traffic through the canals at Sault Ste. Marie in Michigan and Ontario showed a marked improvement in 1935 over the previous year, according to the annual statement issued by Isaac De Young, General Superintendent. The number of vessels using the canals increased from 11,399 in 1934 to 12,960 in 1935, the registered net tonnage rising from 35,794,600 to 41,566,253. The total freight carried rose from 42,248,131 short tons to 48,293,308 short tons. Passenger traffic showed a slight decline, dropping from 33,636 to 32,937.

Of the freight carried, the greatest percentage of increase was in broken stone, gravel, and sand, which rose from a total of 157,856 short tons in 1934 to 502,417 short tons in 1935. Hard coal showed the greatest percentage of decline, dropping from 259,872 short tons in 1934 to 200,189 short tons in 1935. The transportation of other freight is shown in the accompanying comparative table.

FREIGHT TRAFFIC THROUGH THE SAULT STE. MARIE CANALS

	1934	1935
Lumber M ft b m	27,897	40,044
Pulpwood cords	141,632	154,713
Flour barrels	6,162,297	6,840,720
Wheat bushels	173,033,726	179,603,288
Grain, excluding wheat .. bushels	46,498,900	43,106,702
Copper tons b	30,849	53,027
Iron Ore tons b	22,945,299	29,283,943
Structural Steel and Pig Iron tons b	183,901	290,223
Coal, soft tons b	10,148,157	8,961,541
Coal, hard tons b	259,872	200,189
Salt tons b	25,010	40,819
Oil tons b	527,916	584,549
Stone * tons b	157,856	502,417
General Mdse. tons b	846,844	1,022,526

* Includes broken stone, gravel, and sand. b Short tons.

The United States canal was opened April 16 and closed December 16, a season of 245 days. The Canadian canal was opened May 2 and closed December 14, a season of 227 days. A total of

46,360,926 short tons was carried through the United States canal, of which 35,785,215 short tons was east bound, and 10,575,711 short tons was west bound. The total through the Canadian canal was 1,932,382 short tons, with 1,406,572 short tons east bound and 525,810 short tons west bound.

SAUTET DAM. See DAMS.

SAXONY. See GERMANY.

SCANDINAVIAN LITERATURE. Danish. Fiction. After some 30 years of silence, the old-time favorite, Johannes V. Jensen, came back with *Dr. Renaults Fristelser* (Dr. Renault's Temptations), the strange story of a man who is permitted to re-live his life. Johannes Buchholtz maintained his usual high standard in *Mennesker vil være Guder* (Men Wish to Be Gods), whose hero, a young Catholic priest, has an inordinate desire to control the will of his fellow men. Karl Bjarnhof's *Møl og Rust* (Moths and Rust), the story of a Danish provincial town, is noteworthy alike for its character delineation and for its local color. An enthusiastic reception was accorded Martin A. Hansen's first novel, *Nu opgiver han* (Now He Surrenders), a faithful picture of political and religious conflicts in contemporary Denmark.

Miscellany. In *Under aaben Himmel* (Under Open Sky), Martin Andersen Nexø continued his autobiography, begun three years ago, in *Et lille Kræ* (A Tiny Creature). Among books on travel should be mentioned: Peter Freuchen's *Flugten til Sydamerika* (The Flight to South America), which gives a detailed account of an aeroplane trip; O. A. Rygaard's *Mellem Tyrker og Kurder* (Between Turks and Kurds), which relates the author's interesting and sometimes thrilling experiences as an engineer in Asia Minor, and Aage Krarup Nielsen's *Marco Polos Rejser* (Marco Polo's Travels), in which Marco Polo's adventures are retold with the charm of an Oriental tale.

Norwegian. Fiction. In *Ingen vei går utenom* (There Is No Way Around), Trygve Gulbranssen again showed his ability to depict Norwegian farm life in a realistic and sympathetic manner. In *Arken* (The Ark), the younger Kristian Elster recounts the troubles of a family that moves into Oslo during the time of house famine. Johan Falkberget's *Tårn-vekteren* (The Warden of the Steeple) is the third volume in the series *Christianus Sextus*. In this, as in the two former volumes, the action goes back to the earlier part of the 18th century. The chief characters of Nini Roll Anker's *Den som henger i en tråd* (Hanging by a Thread) are a group of working women pictured against the background of modern industrial life. In Gabriel Scott's *Skipper Terkelsen's levnadsløp* (The Life of Captain Terkelsen), the hero is seen in a reminiscent mood, reviewing portions of his life. Sigurd Hoel's *Fjorten dager før frostnettene* (Two Weeks before the Frosty Nights), the story of a physician who fears the approach of old age, is a book interestingly written and full of dramatic conflicts. Under the title *Oslo fortellinger* (Tales from Oslo), Oskar Braaten published a number of his short stories written between 1910 and 1922.

Miscellany. The new interest in Ethiopia caused by recent political events has expressed itself in the publication of several books on this country. Of these, Harald Juell's *Etiopia* (Ethiopia) deserves special mention for its thorough and authoritative treatment. *Det norske Folks Liv og Historie* (The Life and History of the Norwegian People), of which Haakon Shetelig wrote the first volume some time ago, was completed through the

publication of vols. viii-x, written by Wilhelm Keilau.

Swedish. Poetry. Olof Lagercrantz' collection *Den döda fågeln* (The Dead Bird) shows a mastery of technique and a sensitiveness to linguistic niceties. Many of the poems are written in a style reminiscent of the 18th century. The poems of Nils Englund's *Nar ljusen tändas* (When the Candles Are Lighted), connected as they are through a unity of symbolism and an identity of theme, give the impression of being the successive parts of a musical suite.

Fiction. In *Paul Hoffman, laroverksadjunkt* (Paul Hoffman, Instructor), a book unique as a picture of Swedish academic life and at the same time teeming with human interest, Hugo Swensson follows the career of a preparatory school teacher from the beginning of his probation year to the end of his active service. Vilhelm Moberg's *Sankt sedebetyg* (Low Grade in Deportment) portrays a man who probes the causes of his own unhappiness. The chapters dealing with the hero's childhood and youth are especially good. The story of *Svenske Apollo* (The Swedish Apollo) by Walde-mar Hammenhog centres around a short-lived insurance company and its office force. Harry Blomberg's *Det brinner i snön* (Snow on Fire) traces the character development of a man who, unable to follow his inclinations and devote himself to scientific studies, becomes a minister of the state church. Stina Palmberg's *Svårhanterliga barn* (Difficult Children), a volume of short stories, is based on the author's experiences as a teacher.

Science, History, Criticism. Helge Nelson's *Nord-Amerika* (North America) is a thoroughly scientific and at the same time highly interesting description of the North American continent and its inhabitants. Among historical works should be mentioned Kjell L. Kumlien's *Med svenskarna och Engellbrekt* (With the Swedes and Engellbrekt), an account of the War of Liberation of 1434, and Sune Lundqvist's *Svenskarna i heden tid* (The Swedes in Heathen Times). Some of the outstanding critical works were: Olle Holmberg's *Viktor Rydbergs lyrik* (Viktor Rydberg's Lyric Poetry); Holger Ahlenius' *Tor Hedberg*; and Vilhelm de Geer's *John Keats*.

SCHAFER, SIR EDWARD ALBERT. See SHARPEY-SCHAFER, SIR EDWARD ALBERT.

SCHECHTER CASE. See UNITED STATES under Administration.

SCHINDLER, KURT. A German-American musician, died in New York City, Nov. 16, 1935. Born in Berlin, Feb. 17, 1882, he was educated at the gymnasium there and at the universities of Munich and Berlin. He studied music under Ludwig Bussler, Conrad Ansong, Friedrich Gernsheim, and Ludwig Thuille, and made his first appearance as a composer at the Krefeld Music Festival of 1902. The next year he first appeared as a conductor at the Stuttgart Court Theatre. During 1902-03 he conducted at the Stuttgart Hoftheater, and the following year at the Würzburg Stadtheater. He became assistant to Richard Strauss at the Berlin Opera House in 1904, remaining until 1905 when he came to America as assistant conductor at the Metropolitan Opera House, New York, where he remained until 1908.

In 1909 he organized the McDowell Chorus, which because of the enlargement of the scope of its work, became the Schola Cantorum in 1912. Under his direction, many novelties of the modern composers were introduced, and he brought to the attention of American audiences the works of

Rimsky-Korsakov, Debussy, Borodin, and Sibelius. Also, at this time he accepted the position of choir master at Temple Emanu-El. In 1926 he resigned from the Schola to become director of music at the Roxy Theatre, then being built. He gave as his reason for leaving the fact that whereas he was then only reaching a few thousand people, in his new position he would be able to reach hundreds of thousands. His connection with the theatre was of short duration, and during 1926-27 he directed the Musical Forum, which he established, in a series of concerts of varied types.

Subsequently, he devoted all his time to his duties as an editor and reader for the music publishing house of G. Schirmer, a position he held since 1907. In 1922 he served as president of the Biennial Musical Festival of Catalonia, Spain, being the first foreigner to hold such a post. He arranged many folk songs and choral music, and was the editor of *Six Old French Christmas Carols* (1908); *The Development of Opera* (1912); *A Century of Russian Songs* (1912; 2d volume, 1917); *Russian Liturgical Songs*, with Charles W. Douglas (1913); *Songs of the Russian People* (1915); *Ten Student Songs of Finland* (1915); *Old Spanish Sacred Motets* (1918); *Modern Spanish Choral Works* (1918); and *Sixty Russian Folk-Songs*, 3 vols., (1918-19).

SCHOOLS. See EDUCATION IN THE UNITED STATES, and the paragraphs on *Education* under the various countries and the States of the United States.

SCHÜCKING, WALTHER M. A. A German jurist, died at The Hague, Aug. 26, 1935. Born at Munster, Westphalia, Jan. 6, 1875, he was educated at the gymnasium there and studied national economy and law at the universities of Munich, Bonn, Berlin, and Göttingen, receiving the degree of L.S.D. at the last-named in 1897. Two years later he was appointed to the faculty of the University of Breslau as a teacher of law, and in the following year became assistant professor, and in 1903, full professor. In the previous year he was made dean of the law faculty at the University of Marburg. He was promoted to the High School for Economics in Berlin in 1921, and in 1926 was made director of the Institute of International Law at the University of Kiel, where he served until 1933, when he was dismissed for "political unreliability."

During the years 1919 to 1928, he served as a Democratic member of the Reichstag, and in the former year was the chief member of the German delegation to the Peace Conference at Versailles. His knowledge of and experience in law, led to his election to the Permanent Court of International Justice in September, 1930, the first German to be appointed. Also, he was a member of the Permanent Court of Arbitration, and his efforts on behalf of peace led to his mention for the Nobel Prize Award in 1934. Schucking also served as Chairman of the League for International Understanding; deputy chairman of the League of Nations Union and founder of the German group; and chairman of the German group of the Inter-Parliamentary Union. Also, he held membership in the American Institute for International Law.

A contributor to many law journals on international law, he edited *Akten zum Kriegausbruch*, and was the author of *The Union of States of the Hague Conferences* (1912); *The League for World Peace* (1917); *Perennial Peace* (1917); *The International Law Doctrine of the World War* (1918); *Commentary on the Treaty of Versailles*

(1920); *The Geneva Protocol* (1925); *The Statute of the League of Nations* (1931).

SCOTTSBORO CASE. See ALABAMA under *Political and Other Events*; LAW.

SCULPTURE. The work of cutting in stone or marble the sculpture for buildings erected by the Federal Government in Washington, begun in 1934, continued well into 1935. Most notable were those for the Archives building by James Earle Fraser, Robert Aitken, and Adolph Weinman. A Navy and Marine Memorial by B. del Piatta was erected on a site adjacent to the Mt. Vernon boulevard. An Armillary Sphere by Paul Jennewein, through the gift of a private donor, was erected in Meridian Park, Washington. D. C. Congress approved the erection of a memorial to Grover Cleveland in the National Capital as well as a memorial to Thomas Jefferson the cost in each instance to be met by private subscription.

Early in the year the Painting and Sculpture Section of the Procurement Division of the Treasury Department commissioned Paul Manship to do a statue of Samuel Osgood and William Zorach a statue of Franklin for placement in the new Post Office building, and later in the year organized a competition to obtain 12 statues of different types of mail carriers for placement in niches in the Postmaster General's reception room. Sixty-seven models were submitted in this competition by 47 sculptors, from among which a jury, consisting of William Adams Delano, of the firm of Delano and Aldrich, architects of the building, Alice Decker, Paul Manship, and William Zorach, selected the following for award:—Berta Margoules, Stirling Calder, Sidney Waugh, Arthur Lee, Concetta Scavaglione, Carl L. Schmitz, Gaetano Cecere, Oronzio Maldarelli, Chaim Gross, Attilio Piccirilli, Heinz Warneke, and Louis Slobodkin. In addition, the jury recommended 12 other sculptors, competing, for future appointments. All of the 67 works submitted were on exhibition in the Corcoran Gallery of Art in October.

Portrait heads of President Roosevelt and eight of his administration leaders—"New Dealers"—by Reuben Nakian were exhibited first in the Corcoran Gallery of Art in April and later in the Downtown Gallery, New York, causing comment. Those represented were Secretaries Ickes, Hull, and Wallace, Under-Sec. Rexford G. Tugwell, Gen. Hugh Johnson, Donald Richberg, and Harry L. Hopkins. There were two heads of General Johnson. All of these were life-size, but the head of the President was much larger. Mr. Nakian was the sculptor of the colossal statue of "Babe Ruth," base ball player, which was exhibited in Rockefeller Center, New York, in 1934, exciting much interest. His portraits of the President and his advisors were all done in like manner and with equal zest for exaggeration which at times approached caricature. One commentator wrote that Mr. Nakian's venture deserved support as "a courageous and radical step toward divorcing the general public from the plastic platitudes of official portraiture." Certainly his way was unconventional and his likenesses not flattering.

A notable retrospection exhibition of sculpture by Gaston Lachaise, whose death occurred later in the year, was held by the Museum of Modern Art in February.

From April 16 to May 4, a retrospective exhibition of sculpture by George Gray Barnard was held in the Grand Central Galleries, New York. This was the first exhibition that Mr. Barnard has held in 27 years and it covered productions from the "Laughing Faun" of 1896 to recent allegorical



© Walter Russell Courtesy of Grand Central Art Galleries

"MARK TWAIN MEMORIAL"

By Walter Russell

To Be Erected at Hannibal, Mo



"POSTMAN"

By Sidney Waugh

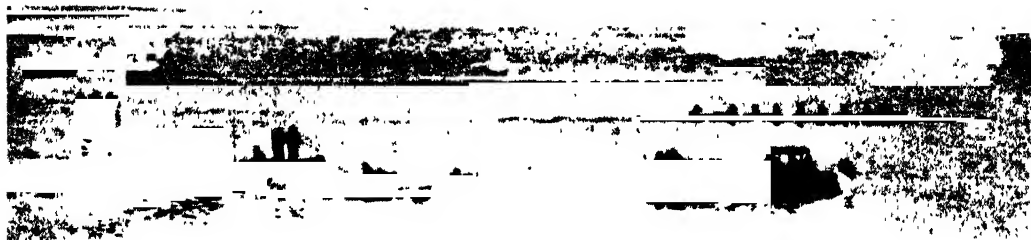
One of the figures selected for the new U.S. Post Office Building, Washington, D. C.

Fewing Galloway

"ARCHIVES BUILDING"

Washington, D. C.

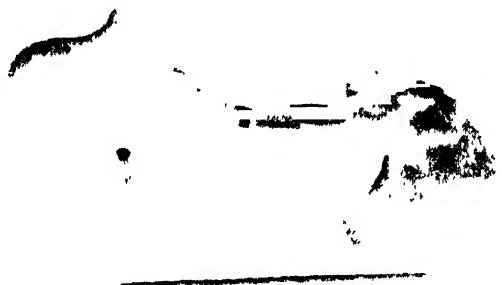
Sculpture done by James Earle Fraser, Robert Aitken, and Adolph Weinman



Acme

THE POUGHKEEPSIE, N. Y., REGATTA

The University of California crew (in the foreground) winning its third straight victory (June 18, 1935) The Cornell crew came in second



Acme

THE BAER-LOUIS FIGHT

A scene from the bout in New York City, Sept. 24, 1935, in which Baer was defeated in the fourth round



Acme

THE NATIONAL AMATEUR GOLF CHAMPIONSHIP

Lawson Little winning his fourth straight major golf title at Cleveland, Ohio, Sept. 14, 1935

SPORTS

subjects purposed for his "Rainbow Arch" to be set up according to the sculptor's plan in Tryon Park, N. Y.

The collection of bronze reductions of her "Races of Mankind" sculptures done for the Field Museum, Chicago, by Malvina Hoffmann, was displayed as a notable feature at the California Pacific Exposition in San Diego in the summer of 1935.

By special invitation Paul Manship exhibited 80 of his works in sculpture in the Tate Gallery, London, in June and July,—an unusual honor as only once before was this privilege accorded a foreign artist, that being Carl Milles of Sweden.

A group exhibition of "Sculpture by Young Sculptors," 19 in number, representing two distinct movements, "realism with its spiritual concepts and modernism with its emphasis on individuality," was held in the Brooklyn Museum, May to September.

The Museum of Modern Art acquired an heroic statue of Mother and Child cut by William Zorach from a block of Florida Rosa marble.

G. MacGregor Proctor, a Yale graduate, and son of the well-known sculptor, Phimister Proctor, won the 1935 Fellowship in Sculpture of the American Academy in Rome by a group entitled "We Are the Dead." The scholarship in Sculpture offered by the Beaux Arts Institute was awarded John Amore on a group entitled "The Astronomer."

Gaetano Cecere was awarded the Lindsey-Morris Memorial prize of \$300 by the National Sculpture Society for a work in low relief shown in their annual exhibition.

The Society of Medalists issued two medals to its members in 1935. These were designed and modeled by Lorado Taft and Anthony de Francisci respectively.

In commemoration of the hundredth anniversary of the birth of Mark Twain a group by Walter Russell to be erected in Hannibal, Mo., the birthplace, was exhibited in the Grand Central Galleries. This showed the great humorist surrounded by the characters he had created. A memorial plaque was made by John Flanagan.

Phimister Proctor's superb equestrian statue of "General Robert F. Lee and the Young Soldier" for Dallas, Texas, was completed and a model in reduction placed in the Corcoran Gallery of Art. Bryant Baker did a statue of "The Young Lincoln" for Delaware Park, Buffalo.

Among the losses by death were the following well-known sculptors: Augustus Lukeman (q.v.), Douglas Tilden (q.v.), C. J. Barnhorn, Henry K. Bush-Brown, Gaston Lachaise (q.v.), Charles Henry Niehaus, Enid Yandell, Clara Hill, George E. Ganier, Guiseppe Moretti, Frank Stephens, John Paulding, Mark Hopkins, Jr.

SEISMOLOGY. R. C. Hayes has pointed out a prominent phase on seismograms of certain deep focus earthquakes which has not been recognized heretofore and which should prove quite useful in determining the focal depths of abnormally deep earthquakes. This phase has been identified as a transverse wave reaching the seismograph after having been twice reflected, first at the earth's surface near the epicentre, and then at the boundary of the earth's core. This phase is similar in character to the transverse wave which is reflected once (at the earth's core). The time interval between these two phases provides a comparatively accurate method for determining focal depths of deep earthquakes from a single seismogram (provided the seismograph is at a short epicentral distance);

this time interval is then practically independent of the epicentral distance.

There has always been the hope on the part of many persons that seismologists could find accurate ways of predicting earthquakes. Recently it has been suggested that anomalous electrical potentials may arise in the ground during the building up of the stress conditions which ultimately result in an earthquake. Electrokinetic phenomena may reasonably be looked for under such conditions, and if they could be detected and the resulting ground potentials proved to be measurable, then it is not unlikely that when mapped they would afford a clue as to the stress distribution in the district examined.

Whether this suggestion will prove valuable is not known; the problem of earthquake prediction is certainly a difficult one and those interested in it should read the comments by Landsberg, Wood, and Gutenberg (See *Science*, vol. 82, pp. 37, 219-220).

The U.S. Coast and Geodetic Survey in coöperation with other agencies has carried out many experiments on the effects of earthquakes on buildings. These experiments were begun several years ago and their results will enhance even further the ability of engineers to construct buildings which will resist earthquake shocks.

Several persons have been investigating the possibilities of using a well gauge, recording the height of water in a well, as a seismograph. The results obtained have been interesting and no doubt more work of this nature will be done. See EARTHQUAKES.

Bibliography. H. Jeffreys, *Earthquakes and Mountains* (London).

SELANGOR. See FEDERATED MALAY STATES.

SELENIUM. See CHEMISTRY, INDUSTRIAL AND APPLIED.

SEMBRICH, zëm'brîk, MARCELLA (PRAXEDE MARCELLINE KOCHANSKA). An American-Polish opera singer, died in New York, Jan. 11, 1935. Born at Wizniewczyk, Galicia, Feb. 15, 1858, at the age of four she began to learn the violin and piano. She succeeded in entering the Lemberg Conservatory at an early age and for several years studied piano under William Stengel, whom she later married. On the advice of Professor Epstein and Mme. Marchesi, she gave up the piano and concentrated on her voice. She studied first with Rakitansky, and later with the younger Lamperti in Milan. In May, 1877, she was married, and on June 3 made her début at Athens in *I Puritani*. She was well received and returned to Vienna to study under Professor Levy. In 1878 she was invited to sing at the Dresden Royal Opera House, and remained there two years, when she accepted an invitation to appear in England, singing for the first time on June 12 at the Royal Italian Opera. She also appeared there during the seasons of 1881-84. About this time she took her mother's maiden name, Sembrich, as her professional name.

In 1883, Mme. Sembrich was brought to New York by Henry E. Abbey in order to make effective competition between the New Metropolitan, of which he was impresario, and the old Academy of Music. Her début was made on October 24 of that year in *Lucia di Lammermoor*, and the following morning, Henry E. Krehbiel, the critic of the *New York Tribune*, wrote that she was "a singer of threefold charm—loveliness of person, address, and voice." He described her style as "exquisite and plainly the outgrowth of a thoroughly musical nature; as uniting some of the loftiest elements of art

—reposefulness of manner, smoothness and facility of execution, and such perfect balance of tone and refinement of expression as are found only in one richly endowed with deep musical feeling and ripe artistic intelligence."

She returned to Europe in the fall of 1884 and for a number of years appeared in opera and concerts at St. Petersburg, Moscow, Warsaw, Berlin, Paris, and Madrid. In 1897 she returned to America for a concert tour, and in the following year returned to the Metropolitan, singing on the second night of the season, Nov. 29, 1898, Rosina in *Il Barbiere di Siviglia*. Also, she sang Susanna in Mozart's *Le Nozze di Figaro*, Juliette in Gounod's opera, and Lucia. The following season she showed her versatility by singing in 12 operas, one of them being *Die lustigen Weiber von Windsor*, and introduced her memorable performance of the Queen in the *Magic Flute*, and also substituted for Mme. Calvé as Marguerite in *Faust*.

As in the following year (1900) it was Mme. Melba's intention to retain all the rôles in the repertory, leaving to Mme. Sembrich only the Mozart rôles and a few others, Mme. Sembrich announced that she would appear only in concert work and at the head of a small opera company of her own. She toured the country, but became ill in San Francisco and was forced to abandon her enterprise. She returned to Europe in 1901 and soon was again singing in opera. Subsequently, she returned to opera in America, and sang with Caruso when he made his début. At the close of the 1905-06 season, the Metropolitan Opera Company went to San Francisco, where it suffered in the catastrophe that occurred. Mme. Sembrich gave a concert for the relief of the members of the Company, the musicians of which had lost their instruments. On Feb. 6, 1909, she retired from the operatic stage saying in explanation, "It is because I like the sun best when it is high. It is better that I leave when every one is asking 'Why?' than later when my ability might be less." A reception was held on the stage that night, after scenes from acts from *La Traviata*, *Il Barbiere*, and *Don Pasquale* had been performed, and on the following night the musicians of the city held a banquet in her honor.

Mme. Sembrich sang occasionally in European opera but confined her American appearances to concert work, in which she introduced the singing of folk songs. In the winter of 1914 she organized the Polish Relief Committee and served as its president until 1915 when she retired because of ill health. For the season of 1916-17 she had planned a series of four historical song recitals, but her health, which she had sought to regain in Florida, would only permit her to make one performance. This last performance took place on Jan. 4, 1917, and consisted wholly of folk songs. Her husband died in May, 1917, and Mme. Sembrich retired from public life to teach singing, pupils coming from all the world over for her tutelage.

In 1933 she returned to the stage of the Metropolitan at the Jubilee Stage Show and asked that her old friends aid the Metropolitan in carrying on. On Feb. 15, 1934, she appealed to the public for aid to the Philharmonic-Symphony Orchestra of New York.

SENEGAL. See FRENCH WEST AFRICA.

SENSITIZED MATERIALS. See PHOTOGRAPHY.

SERBIA. See YUGOSLAVIA.

SEWERAGE AND SEWAGE TREATMENT. Actuated by the increasing need and public demand for sewage-treatment works to

check the growing pollution of both fresh and salt waters and spurred on by the desire to relieve unemployment and take advantage of Federal aid, 1935 was an active year in the construction of sewers and sewage-works. Notable among large sewers were those of New York City and the Chicago and Minneapolis-St. Paul sanitary districts. At Chicago 27.3 miles of intercepting sewer tunnels from 4 to 17 ft. in diameter were under construction. At the Twin Cities some of the sewers were deep underground in white sandstone. This material was broken down by air jets, power driven chisels and blasting. The finely pulverized stone, mixed with water, was pumped to the surface.

Treatment. A country-wide survey made for the National Resources Committee showed that the sewage of 28,400,000 people, or 40 per cent of the urban population of the United States, was receiving some degree of treatment. The states of Connecticut, New York, and New Jersey, with Congressional approval, created the Interstate Sanitary Commission to control pollution of the waters common to the three states. Chicago continues to be the largest and most active centre of sewage-works construction (see earlier YEAR BOOKS). The Chicago Sanitary District put into use a third set of Imhoff or two-story settling and digesting tanks, making 108 in a single group with a total daily capacity of 472 million gallons—by far the largest plant of this type in the world. Alongside these tanks an activated-sludge plant was put under construction. The first unit, with a daily capacity of 400 million gallons, will also be a record breaker even before it is tripled in size. Elsewhere in the same district a 136-million gallon activated-sludge plant was being built. A 200-million gallon plant of the same type has been in use since 1928.

Among other cities now building or enlarging activated-sludge plants are Providence, Hartford, Columbus, Indianapolis, and Milwaukee. (See earlier YEAR BOOKS.) Los Angeles was building a 120-million gallon sedimentation plant to replace a plant that employs fine screens. The sludge will be passed through digestion tanks, vacuum filters, dryers, and incinerators.

Other major sewage-treatment projects, for which the type of treatment has not been decided, are those at Buffalo and Detroit. Partial treatment of the sewage of San Francisco, to be carried out in stages at two large plants, has been advised by a board of consulting engineers. In view of the large volume of salt water available for dilution, only screening and aeration are considered necessary. Farther north on the Pacific Coast the Lake Washington Metropolitan Sewerage Commission of Kings County has been created with power to make plans and build intercepting sewers and sewage-treatment plants for all the communities in the county outside of the city of Seattle.

In the east, the Merrimack Sewerage District has been created, with provisional power to build and operate intercepting sewers, pumping and treatment plants for 16 communities, including Lawrence, Lowell, Haverhill, and Newburyport. This project is conditioned on (a) approval of the plans by the state department of health, as is always required in Massachusetts, and (b) a Federal allotment of at least \$10,000,000 by Jan. 1, 1936. Up to December 5 no action on this project had been taken.

Chemical Precipitation. The country-wide survey, made by the writer of this article, showed that near the close of the year 1935 about 35 American municipalities had chemical precipita-

tion plants in use, 11 plants under construction, and 25 cities had plants more or less definitely in progress. Significant for the future of the revival is the fact that a majority of the new chemical precipitation plants are designed for municipalities where either trade wastes predominate or else where plain sedimentation is sufficient except at periods of low stream flow or during ocean or lake bathing seasons, the latter as at Coney Island (New York City) or for the South Side Sanitary District centring at Waukegan, Ill. The value of chemical precipitation where seasonal part-time treatment is adequate is emphasized by the conditions in the Minneapolis-St. Paul Sanitary District, where the flow records of the Mississippi River for many years past show that for years at a stretch the river volume is sufficient to dilute the sewage of the two cities if treated by sedimentation only while for other periods that process could be advantageously supplemented by chemical precipitation for two to five months of the year, with an average of two months. In contrast the flow of the Potomac River at Washington is large and regular enough to be dealt with all the time by screening and sedimentation only.

Atlanta, Ga., is to build seven sewage-treatment plants and enlarge and improve another, giving that city and outside towns eight plants with capacities ranging from 42 million to a quarter-million gallons a day. The largest of these plants will rely on plain sedimentation most of the time, with chemical precipitation and chlorination at times of low flow of the Chattahoochee River. At a 14-million and also a 6-million gallon plant in the Atlanta district the effluent from tanks lightly dosed with precipitants will go to sprinkling filters and then to final settling tanks. In most of the large cities now building sewage-works the activated-sludge process has been adopted or else plain sedimentation aided in summer by chemical precipitation. Turning to lesser municipalities: a survey of 85 small cities that had recently built or were then building sewage-treatment plants showed the following distribution of processes and combinations: sedimentation with separate sludge digestion, 41 cities; Imhoff tanks, 26; activated-sludge, 11; sedimentation combined with trickling filters, 4; plain sedimentation, 2; one-story septic tank, 1. (*Municipal Sanitation*, July and August.)

References. For a comprehensive review of the history of chemical precipitation, its recent technique, experimental studies, leading patents, the number and location of plants using or proposing to use that process and the chemicals employed, see report made in October by the Sewage Committee of the American Public Health Association. (*Sewage Works Journal*, November, 1935.) For detailed illustrated descriptions of the largest sewers and sewage-works in the foregoing article see *Engineering News-Record*. Sewer tunnels for the Chicago and Minneapolis-St. Paul districts, June 13, pp. 831-35, and November 7, pp. 627-33; Chicago's 400-million gallon activated-sludge plant, August 8, pp. 186-88; Coney Island sewage-works, October 10, pp. 505-06. For a tabulation of American sewage-works by states and methods of treatment (state and grand totals only), August 15, p. 224, and folding inset table; list of cities having chemical precipitation plants, arranged by states, and regrouped by chemicals used, November 28, pp. 748-51.

SEX. See **PSYCHOLOGY**; **ZOOLOGY**.

SEYCHELLES, sā'shēl'; -shēlz'. A British colony in the Indian Ocean, consisting of about 92

islands of which the largest were Mahé (55 sq. m.) and Praslin (15 sq. m.). Total area, with dependencies, 156 sq. miles; population (1933), 28,235, compared with 27,444 (1931 census). Capital, Victoria. The chief products were copra, vanilla, cinnamon, essential oils, soap, guano, and tortoise-shell. In 1934, imports were valued at Rs823,953; exports, Rs980,104; revenue, Rs795,767; expenditure, Rs679,256; public debt, nil (rupee averaged \$0.3788 paper for 1934). Budget estimates (1935): revenue, Rs564,000; expenditure, Rs538,000. The colony was administered by a governor, assisted by an executive council, and a legislative council. Governor, A. F. Grimble.

SHAN STATES. See **BURMA**.

SHARPEY-SCHAFFER, SIR EDWARD ALBERT. An English scientist, died Mar. 29, 1935, in London, where he was born, June 2, 1850. He took his M.D. degree at Berne and Groningen and from the University of Louvain received the degree of D. Sci. Med. As assistant professor of physiology he joined the staff of University College, London, in 1874, becoming, in 1883, Jodrell Professor. He was appointed professor of physiology at the University of Edinburgh, and retired in 1933.

Dr. Sharpey-Schafer was particularly distinguished for his studies regarding muscular action and the importance of hormones to the health of human beings. In the course of the latter studies, he suggested the name *insulin* for that chemical product, for it was then thought that this hormone came from the islets and attempts were made to extract it from the pancreas. In 1903 he devised the Schafer method of resuscitation, known also as the "prone method." As this plan required no mechanical apparatus and was easily taught, it naturally adapted itself to first aid, and in 1907 was adopted by the Royal Life Saving Society. In the following year he introduced it to America when lecturing before the Harvey Society of New York, and in 1910 it was officially adopted by the Red Cross First Aid Service.

During the course of his career, Sir Edward was the recipient of many honors, including the Baly Medal of the College of Physicians (1897), Royal Medal of the Royal Society (1902); the Distinguished Service Medal of the Royal Life Saving Society (1909); the De Cyon Prize of the Academy of Sciences and Royal Institute of Bologna for work on the ductless glands (1911); the Neill Medal of the Royal Society of Edinburgh (1922), the Copley Medal of the Royal Society (1924). He was created a baronet in 1913. From 1895 to 1900 he served as general secretary of the British Medical Association, and in 1912 was its president, and as such delivered at Dundee his famous address on the "Origin of Life." Also, he was a Fellow of the Royal College of Physicians at Edinburgh and of the Royal Society.

Besides frequent contributions to the *Proceedings* and *Transactions* of the Royal Society and medical-physiological journals, he wrote: *A Course of Practical Histology* (1877); *Essentials of Histology* (1885; 6th ed., 1902); *Advanced Textbook on Physiology* (1898); *Experimental Physiology* (1910); *The Endocrine Organs*; and *History of the Physiological Society* (1876-1926). With G. D. Thane, he edited the 8th, 9th, and 10th editions of Quain's *Anatomy*.

SHAW, T. E. See **LAWRENCE**, COL. THOMAS EDWARD.

SHIPBUILDING. The total tonnage of merchant vessels launched throughout the world in 1935, as compared with 1934, as reported by *Lloyd's*

Register of Shipping, covering all vessels of 100 gross tons each and upwards for all countries except Russia, for which returns have not been available for some time, aggregated 1,302,080 tons. This was 335,000 tons in excess of the figure for 1934, and the highest recorded since 1931, when the total was 1,617,000 tons. The 1935 aggregate, however, is over two million tons less than in the last pre-war year, 1913.

Only 2 of the 10 leading maritime countries of the world, according to the report of *Lloyd's Register*, from which this article is taken, failed to show an increase over the 1934 figure. These were Japan and Italy. Their declines were slight, however, that for Japan being only 6500 tons, and for Italy, about 4000 tons. On the other hand, Germany launched more than three times as much tonnage as she did in 1934, France two and a half times, and Sweden and Denmark about twice as much. For Great Britain and Ireland, however, the gain was only slightly in excess of 10 per cent. There were somewhat larger proportional gains for Holland and Norway; while the United States showed an increase of about one-third. Great Britain and Ireland, Germany, Japan, Denmark, and Sweden were the only ones to launch over 100,000 tons.

The comparison of tonnage launched in Great Britain and Ireland, the United States, and the other maritime countries taken as a group, is shown for the last two years in the following table, the figures representing gross tons:

	1935	1934
Great Britain and Ireland	499,011	459,877
United States	32,607	24,625
Other countries	770,462	482,917
World Total	1,302,080	967,419

While Great Britain and Ireland in 1932 were launching only 44,000 gross tons more of merchant shipping than the United States, the gap since has steadily widened. Lloyd's figures show that in 1933 Great Britain and Ireland led by 123,000 tons, and in 1934 by 435,000 tons. In 1935 they increased their lead to 467,000 tons. In 1919 American shipyards launched 2,455,000 tons more than those of Great Britain and Ireland. Before the war, however, they were launching only about 1 ton to 7 for Great Britain and Ireland. In 1935 the proportion was about 1 to 15.

A marked gain was shown in the launchings of steam and motor tankers of 1000 gross tons, and upwards, each, during the past year, the advance over the 1934 total being about 140,000 tons. Germany led in tanker construction, with an increase of about 40,000 tons, followed by Denmark, whose launchings of this type of vessel advanced 36,000 tons. Gains were also reported for Sweden, Holland, Japan, and the United States, the latter increasing from only about 5000 tons in 1934, to 26,000 tons last year. Great Britain and Ireland, however, showed a decline. The contrast between

	1935	1934
Germany	67,421	24,700
Denmark	54,490	17,897
Sweden	50,802	32,150
Great Britain and Ireland	50,735	69,066
Holland	34,486	18,725
Japan	26,653	20,102
United States	26,522	4,937
Other countries	26,912	10,760
World Total	338,021	198,337

the tanker output of 1934 and 1935 is shown by the preceding tonnage table.

Of the total tanker construction of 338,021 gross tons, 280,743 tons were motor vessels.

Motorship construction generally showed a sharp advance in 1935, the gain over the launchings of this type of vessel in 1934 amounting to almost 250,000 gross tons. Great Britain and Ireland led in the amount of motorship tonnage launched, but their gain over the previous year was 60,000 tons, as compared with 80,000 tons for Germany.

GROSS TONNAGE OF MOTORSHIP LAUNCHINGS [Courtesy, *Lloyd's Register*]

	1935	1934
Great Britain and Ireland	249,605	188,994
Germany	125,598	45,009
Denmark	113,844	53,886
Japan	110,762	125,688
Sweden	104,007	48,031
Holland	46,390	43,171
Italy	22,667	25,668
United States	1,465	6,402
Other countries	38,618	26,752
World Total	812,956	563,601

It is shown by *Lloyd's* returns that during 1935, 48 steamers and motorships of 6000 to 9999 gross tons were launched as compared with 42 in 1934. Of the larger types of vessels, 10,000 tons and upwards, 23 were sent down the ways in 1935, as against 16 in 1934.

Production of sailing vessels and barges, as launched in 1935, aggregated only 11,420 tons, a decline from the small total of 12,642 tons in 1934. These craft now represent less than one per cent of the total annual launchings.

Some advance was shown in 1935 in the construction of ships fitted with steam turbines, 181,083 gross tons of these being launched, as against 169,967 tons in 1934. For ships having a combination of reciprocating engines and turbines, the 1935 launchings aggregated 70,788 tons, compared with 37,740 tons in the previous year.

For vessels built on the Isherwood system of longitudinal framing, the 1935 launchings totaled 111,288 gross tons, as compared with 71,381 tons in 1934.

Several changes occurred in the ranking of the various ship-constructing countries last year. Great Britain and Ireland retained their lead, as usual, but Germany, with a gain of more than 150,000 tons over her total launchings in 1934, took second place from Japan, by a margin of 80,000 tons, the latter country dropping to the third position, held by Germany in 1934. Comparisons in the volume of tonnage launched by the various countries during the past two years is shown by *Lloyd's* in the following table, the figures representing gross tons:

	1935	1934
Great Britain and Ireland	499,011	459,877
Germany	226,343	73,733
Japan	145,914	152,420
Denmark	122,095	61,729
Sweden	105,538	49,542
Holland	57,133	46,905
France	42,783	15,950
United States	32,607	24,625
Norway	25,716	18,857
Italy	22,667	26,638

The largest vessels launched in the world during 1935 were built in Great Britain and Ireland. These were the *Athlone Castle* and the *Stirling Castle*, each with a gross tonnage of 25,500.

SHIPPING. According to the annual report of the U.S. Bureau of Navigation and Steamboat In-

spection, on June 30, 1935, the merchant marine of the United States, including all kinds of documented craft, comprised 24,919 vessels of 14,653,756 gross tons, as compared with 24,904 vessels of 14,861,834 gross tons on June 30, 1934. Of this total, there were 3873 vessels of 4,569,124 gross tons engaged in the foreign trade, as compared with 3842 vessels of 4,606,623 gross tons on June 30, 1934.

Since June 1, 1921, when our tonnage in the foreign trade reached its greatest volume, 11,077,398 gross tons, there has been a gradual falling off of 6,508,274 gross tons. The decrease in the foreign trade tonnage is due principally to the scrapping of large vessels which belonged to the Shipping Board and to changes from foreign to coasting trade because of greater opportunities in that service.

Since June 1, 1921, the coasting trade tonnage, exclusive of the trade on the Great Lakes, has increased 3,732,160 gross tons.

During the year, 748 vessels of 62,919 gross tons were built and documented, and on July 1, 1935, there were building or under contract to build in our shipyards for private shipowners 49 vessels of 20,292 gross tons. The corresponding figures for 1934 were 724 vessels of 66,649 gross tons built and 53 vessels of 38,102 gross tons under contract to build. Only 1 steel steam vessel of over 1000 gross tons was built during the fiscal year 1935, this vessel being a tanker of 9511 gross tons and licensed for the coasting trade.

On June 30, 1935, the laid-up tonnage of the United States aggregated 2291 vessels of 2,794,098 gross tons, as against 2551 vessels of 3,125,138 gross tons on June 30, 1934.

The disasters to the steamships *Morro Castle*, *Mohawk*, and *Havana* were intensively studied by the Bureau to determine the fundamentals lying behind these disasters.

It was determined that the prevention of the recurrence of similar disasters will depend largely upon the extent to which the Bureau has jurisdiction and control over ship personnel, ship operation, and the design and construction of vessels. These are the three great fundamentals involved.

During the fiscal year 236,260,737 passengers were carried on vessels that are required by law to report the number of passengers carried. Dividing this number by 166, the total number of passengers lost, shows that 1,423,257 passengers were carried for each one lost. During the year 844 lives were directly saved by means of the life-saving appliances required by law.

The total number of lives lost from all causes, passengers and crew, was 350, an increase of 184 over the previous year. Of the lives lost, 146 were from suicide, accidental drowning, and other causes beyond the power of the service to prevent, leaving a loss of 204 chargeable to such accidents as fire, collision, foundering, etc. See MARINE DISASTERS.

SHOE INDUSTRY. The production of leather shoes and slippers in the United States during 1935 was estimated by the *Boot and Shoe Recorder* in its annual summary at 368,000,000 pairs, an increase of about 3 per cent over the production for 1934 of 357,119,401 pairs. The estimated consumption, as compiled by the same publication, for the two years showed a similar rise, from 357,361,000 pairs in 1934 to 366,349,000 in 1935. The greatest increase, as shown in the table below, was in the production of women's shoes. Carefully considering the annual increase in population, the *Boot and Shoe Recorder* has calculated on the basis of the past fifteen years that the yearly nor-

mal consumption of shoes is 2.85 pairs per capita. The consumption in 1935 was slightly in excess of this, 2.88 per capita, as against 2.83 in 1934. By classes, the consumption of women's shoes in 1935, with 1934 figures in parentheses, was 3.20 pairs (3.13); men's, including boys over 15, 2.01 pairs (1.96); misses' and children's, 2.85 pairs (2.74); boys', 1.38 pairs (1.48); infants', 1.96 pairs (1.77); and of miscellaneous types, chiefly slippers, 0.43 pairs (0.43). The steady decline in the consumption of boys' shoes, dropping from a peak of 1.93 per capita in 1928 to 1.38 in 1935, is attributed to the greatly increased use of rubber-soled canvas shoes as regular items of footwear.

U. S. PRODUCTION AND CONSUMPTION OF BOOTS AND SHOES

[In thousand pairs, from *Boot and Shoe Recorder*]

Kinds	1934		1935 *	
	Produc- tion	Consump- tion	Produc- tion	Consump- tion
All kinds	357,119	357,361	368,000	366,349
Women's	138,317	141,344	146,644	146,403
Men's	91,419	90,019	94,436	92,829
Misses' and chil- dren's	34,520	33,869	35,785	35,199
Boys' and youths' ..	17,348	18,646	17,386	17,367
Infants'	19,451	18,515	20,410	19,930
Miscellaneous types, chiefly slippers ..	56,064	54,968	53,239	54,621

* Estimated.

The final production figures for 1935 for boots, shoes, and slippers, other than rubber, and representing approximately 99 per cent of the total output, as issued in March, 1936, by the U.S. Bureau of the Census, Department of Commerce, were appreciably higher than given in the estimate in the foregoing table. According to this report, the total production in 1935 was 383,761,499 pairs. The total was divided into the following classifications: Men's dress shoes, 73,414,890; men's work shoes, 26,110,166; boys' and youths', 17,846,519; women's 145,230,909; misses' and children's, 37,275,876; infants', 21,167,314; athletic, excluding footwear with fabric uppers and rubber soles, 1,960,749; part leather and part fabric, 2,891,088; all fabric, 3,671,231; slippers andoccasins for house wear, 42,055,011; barefoot sandals, beach sandals, and all other footwear, 12,137,746.

SHOOTING. J. B. Royall of Tallahassee, Fla., attended his first Grand American trapshoot at Vandalia, O., in 1935, the richest and most important of all trapshooting events, and strode away with the sport's highest honors, the Grand American Handicap. The 51 year old railroad conductor defeated 614 of the nation's best marksmen to succeed Lawrence George Dana to the laurels. First tying S. G. Vance of Tillsonburg, Ont., with 98 targets hit, Royall went on to crack 47 of 50 in the shootoff to win by a margin of one from his Canadian rival. In third place was one of the sport's big winners, Joe Hiestand, Hillsboro, O., farmer, who captured the American and North American amateur singles and doubles championships and the 500-target world's amateur championship. Elmer Torge, of Wales Center, N. Y., with a perfect score of 200 won the champion of champions title. Fred Tomlin of Glassboro, N. J., won the professional title with 200. In the national skeet championship, staged at Solon, O., L. S. Pratt, of Indianapolis, won the all-bore championship. H. B. Joy of Detroit was winner of the .20 gauge title, Billy Clayton of Calvin, Okla., the small bore crown and Miss Esther Ingalls of Hot Springs, Va., the women's honors.

National rifle shooting honors were taken at

Camp Perry, O., by Serg. Claude N. Harris, of Lancaster, Calif., a Marine. The Marine Corps won team laurels. The United States retained the International Dewar Trophy and also took the R.W.S. Trophy. The United States Naval Academy was winner of the intercollegiate small-bore championship and the Leech Cup went to James A. Wade of Salt Lake City.

R. D. Boerem of the Michigan National Guard won the N.R.A. individual title with pistols and the Marine Corps took team honors.

SHORTT, EDWARD. An English barrister and politician, died in London on Nov. 10, 1935. Born in St. Anthony's, Newcastle, Mar. 10, 1862, he was educated at Durham School as a King's scholar and at Durham University where he was Lindsay scholar of University College. He graduated in 1884 and later received an honorary D.C.L. Called to the bar by the Middle Temple in 1890, he joined the North-Eastern Circuit and became proficient in both civil and criminal practice. From 1907 to 1918 he was Recorder of Sutherland, and from 1910 to 1922 he served as Liberal member from West Newcastle, and was known as a clear and lucid debater, being frequently heard on the Home Rule Bill of 1912. Also, in 1910 he became King's Counsel.

During 1917 he served as chairman of the Select Committee to review the general administration of the Military Service Acts, and in August issued a drastic report which was subsequently acted upon. Its chief feature was a recommendation that the medical examination be transferred from the War Office to a civilian authority. His judicious handling of this difficult subject was a turning point in his political career.

He succeeded Mr. Duke (Lord Merivale) as Chief Secretary for Ireland in April, 1918, and shortly after taking office German intrigue was discovered and about 150 Sinn Feiners were imprisoned. By July the situation had improved and thereafter there was little trouble. After the General Election of 1918, he was promoted to Home Secretary, which he held for over two years. During his administration occurred the police strike of March, 1919, over recognition of the National Union of Police and Prison Officers. Although the situation did not become acute in London, in the provinces, and especially at Liverpool, it was more serious. Mr. Shortt showed courage and skill in handling the matter and an agreement satisfactory to all was reached. With the fall of the Coalition Government in October, 1922, his political career ended, and upon his resignation he was appointed Commissioner of Assize on the Midland Circuit.

He served in 1926 as chairman of the committee on the rating of machinery, and later was chairman of the committees on trusts and heavy motor traffic, and a member of the Defence of the Realm (Losses) Royal Commission. He succeeded T. P. O'Connor as chairman of the British Board of Film Censors in 1929, and served as chairman of the committee of investigation into the Agricultural Marketing Act in 1933.

SIAM. An independent monarchy of southeastern Asia. Capital, Bangkok, sovereign in 1935, Ananda Mahidol, who succeeded King Prajadhipok on Mar. 3, 1935 (see *History*).

Area and Population. With an area of 198,188 square miles, Siam had a population estimated on Mar. 3, 1934, at 12,743,000 (11,506,207 at the 1929 census). The population in 1929 included 10,493,304 Siamese, 445,274 Chinese, 479,618 Indians and Malays, 60,668 Cambodians, and 1920 Europeans

and Americans. Bangkok and its suburbs had 550,000 inhabitants in 1932; Ayadhyia (1929), 272,000. Buddhism is the prevailing religion.

Education. Elementary education in the Siamese language is compulsory and most of the schools provide free tuition. In 1933 there were 6081 local primary schools, with 695,954 pupils, and 1307 private schools, with 59,135 pupils. Government schools numbered 250, with 43,037 pupils. A new university for the teaching of law, politics, and economics was founded in 1934. Medicine, engineering, arts and sciences, and nursing and midwifery are taught at Chulalankarana University at Bangkok.

Production. Agriculture is the main occupation, supporting directly about 83 per cent of the population. Rice is not only the main crop and chief article of diet, but also the leading export. The 1934-35 rice crop was estimated at 5,184,000 tons from 8,457,280 acres (4,938,452 tons from 8,113,276 acres in 1933-34). Production of other crops in 1933-34 was: Rubber, 206,339 piculs (1 picul equals 133.3 lb.); tobacco, 171,292 piculs; pepper, 28,116 piculs; cotton, 31,974 piculs; coconuts, 164,187,828 nuts. Livestock in 1934 included 5,154,134 buffaloes, 5,461,957 bullocks, 311,388 horses, and 10,632 elephants. Exports of teak, the principal forest product, were valued at \$2,050,212 in 1934. Tin output in 1934 was approximately 10,300 metric tons, although Siam's export quota for the year under the International Tin Restriction Scheme was only 9800 tons. Rice milling is the chief manufacturing industry.

Foreign Trade. For the fiscal year ended Mar. 31, 1935, imports were valued at 88,523,017 bahts (92,963,376 in 1933-34) and exports at 167,735,590 bahts (144,079,012 in 1933-34). The chief sources of 1933-34 imports (in 1000 gold dollars) were: Japan, 4307; Singapore, 3705; Netherland India, 3393; Hong Kong, 3314; United Kingdom, 3195. Exports (in 1000 gold dollars) went chiefly to: Hong Kong, 11,280; Singapore, 10,420; Penang, 9775. In the calendar year 1935 imports from the United States totaled \$1,758,054; exports to the United States, \$160,381.

Finance. Budget estimates for the fiscal year ending Mar. 31, 1936, placed receipts at 94,597,839 bahts (74,467,088 in 1934-35) and expenditures at 94,585,315 bahts (74,453,225 in 1934-35). Actual ordinary revenues in 1934-35 totaled 85,961,458 bahts; ordinary expenditures, 85,948,929 bahts.

The public debt on Mar. 31, 1934, stood at £9,134,232 sterling (£8,568,438 on Mar. 31, 1933). The Treasury balance on Mar. 31, 1935, amounted to 67,523,104 bahts. On May 11, 1932, the baht or tical was pegged to sterling at the rate of 11 bahts to the pound.

Communications. The State Railways, aggregating 1857 miles of line in 1933, carried 3,259,443 passengers and 1,053,342 tons of freight in 1933-34. About 100 miles of new line was under construction. Highways extended about 2750 miles. Civil air lines linked the principal cities. A total of 1028 vessels of 1,226,730 register tons entered the port of Bangkok during 1933-34.

Government. The Constitution of Dec. 10, 1932, adopted following the military overthrow of the absolute monarchy, established a constitutional monarchy, in which the King exercised executive power through a State Council appointed by him but responsible to the National Assembly. The King also exercised legislative power with the advice and consent of the National Assembly. Half the members of the Assembly are nominated by the

King and half elected by popular male and female suffrage. The King retained the power to veto legislation, dissolve the Assembly, declare war, and conclude treaties. President of the Council of State and State Councillor for Foreign Affairs in 1935, Col. Phya Phahol Pholphayuha Sena.

History. The long conflict between King Prajadhipok and the revolutionary group headed by Col. Phya Phahol, which seized power in 1932, ended with the King's formal abdication on Mar. 2, 1935. (For the background of Prajadhipok's abdication, see the *NEW INTERNATIONAL YEAR BOOKS* for 1932, 1933, and 1934.) In his abdication manifesto, issued in England, the King said that he accepted Phya Phahol's invitation to continue as constitutional monarch in 1932 on the understanding that a Constitution would be granted and that the public would have a voice in administration. Attributing the military revolt of 1934 to the government's neglect of popular opinion, Prajadhipok declared that he would not surrender his power "to any individual or party so that that power can be wielded in an autocratic way without the people having any voice." Consequently, he felt called upon to abdicate, but he reserved the rights which he had enjoyed before his accession.

On March 7 the government in Bangkok simultaneously proclaimed Prajadhipok's abdication and the succession to the throne of his nine-year-old nephew, Ananda Mahidol. Both proclamations were antedated to March 3. Coronation of the new king was postponed for two years; meanwhile he was to remain in school in Switzerland. A Council of Regency was appointed, consisting of Princes Anuvatana and Aditya, cousin and nephew, respectively, of the ex-King, and Chao Phya Yommaraj, a former Minister of the Interior. Prince Anuvatana, chairman of the board of regents, died on August 12, and Prince Aditya succeeded him. Gen. Chao Phya Bijayandra Yodhin was named the third regent.

During the last days of its session, which ended on Mar. 31, 1935, the National Assembly passed numerous laws. The new Ministry of Agriculture was created, the taxation system was further amended, the government received power to utilize for public purposes deposits of materials and minerals in private hands, the Cooperative Credit Societies Act was amended, etc. These new measures, following upon the King's abdication, caused a general slackening of business activity, which in turn aggravated the existing political unrest. Early in August there was another revolutionary outbreak among the lower ranks of army officers. The outbreak was crushed and the ringleaders, who were alleged to have conspired to assassinate Prince Aditya, Luang Pradit, and other prominent members of the government, were severely punished. Sentences ranging from death to 16 years' imprisonment were imposed upon 13 of the rebel officers on September 9.

The strongly nationalistic policy of the government was reflected in laws promulgated during 1935 making all persons born in Siam subjects of that kingdom and providing that education in the Siamese language was compulsory for all children between the ages of 7 and 14. Protests of the large Chinese population in Siam against these decrees were disregarded. It was reported in July that the Nanking Government was planning retaliatory measures of an economic nature, particularly a ban on imports of rice from Siam. The Bangkok authorities meanwhile were rapidly strengthening their army, navy, and air forces by extensive purchases of foreign armaments. Numerous indications

of a continued rapprochement between Siam and Japan were reported during the year. Siamese military and naval officers were being trained in Japan, Japanese exports to Siam recorded a phenomenal gain, and steps towards closer economic collaboration were taken. Siam, so long partially isolated from world affairs, was apparently being swept into the maelstrom of international rivalries in the Far East.

SIBERIA. The general name applied to the vast area of northern Asia extending from the Ural Mountains to the Pacific and from the Arctic Ocean to Manchuria, Mongolia, and Soviet Central Asia. Siberia was divided into administrative units of the R.S.F.S.R., the largest of the seven constituent republics forming the U.S.S.R. (q.v.). The divisions, with capitals in parentheses, are shown in the accompanying table.

<i>Division (Capital)</i>	<i>Sq. m.</i>	<i>Pop. (1931)</i>
Ural Area * (Sverdlovsk)	660,000	7,688,400
W Siberian Area (Novosibirsk) ..	503,653	8,767,200
E Siberian Area * (Irkutsk)	1,377,441	3,143,400
Yakutsk Republic (Yakutsk)	1,552,994	308,400
Far Eastern Area (Khabarovsk) ..	900,731	1,593,400
Total	4,994,819	21,500,800

* Includes a small section of European U.S.S.R. * Includes Buriat-Mongol Republic (150,193 sq. m.; 3,143,400 people; capital, Ulan-Ude).

Chief towns (with 1933 populations in parentheses): Sverdlovsk (481,000), Novosibirsk (294,000), Omsk (227,000), Vladivostok (190,000), Irkutsk (158,500), Tomsk (128,400), Barnaul (109,200), Krasnoyarsk (101,500), Yakutsk (10,558).

SIBERT, BRIG. GEN. WILLIAM LUTHER, U.S.A., RET. An American army officer and engineer, died near Bowling Green, Ky., Oct. 16, 1935. Born at Gadsden, Ala., Oct. 12, 1860, he attended the University of Alabama from 1878 to 1880, and in 1884 graduated from the United States Military Academy with honors, and on June 13 of that year, was commissioned a 2d lieutenant of engineers. Desirous of furthering his career, he entered the Engineering School of Application, graduating in 1887, and was then assigned as an assistant engineer on river work in Kentucky. The following year he was promoted to 1st lieutenant.

From 1892 to 1894, he served as an engineer on the Sault Ste. Marie Canals at Sault Ste. Marie in Michigan, and was then transferred to Arkansas to become engineer in charge of the river and harbor district there. Two years later (1896) he was made a captain, and in 1898 became instructor of civil engineering at the School of Application. He held this position for a year and was then assigned to the 8th Army Corps in the Philippine Islands as chief engineer and general manager of the Manila and Dagupan Railroad. Returned to the United States in 1900, he was made chief engineer of the river and harbor district of the eastern section of the country with headquarters at Louisville and Pittsburgh. He held this post until 1907, having in the meantime (1904) been promoted to major.

With the construction of the Panama Canal, Major Sibert was appointed a member of the Isthmian Canal Commission in March, 1907, and as such had charge of the construction of the Gatun Locks and Dam of the Panama Canal; the west breakwater of Colon Harbor, and excavation of the Channel from Gatun to the Atlantic Ocean. He was relieved of these duties in April, 1914, and under the joint auspices of the American Red Cross and the Chinese Government, he served, from June to

October, 1914, as chairman of the board of engineers on the flood prevention problem of the Huai River Valley. On Mar. 4, 1915, he was promoted to brigadier general and received the thanks of Congress for his work on the Panama Canal.

At the entrance of the United States in the World War, General Sibert was the commander of the Pacific Coast Artillery District. Commissioned a major general on June 28, 1917, he was given the command of the first division of American troops sent to France under General Pershing. He held this post but a short time, and from January to May, 1918, served as commander of the Southeastern Department at Charleston, S. C. He was then called to Washington to organize and direct the Chemical Warfare Service of the United States Army, which, under his administration, developed into an important branch of the Service. While Director he successfully opposed Gen. Peyton C. March and Secy. of War Newton T. Baker, who believed that the Bureau should not be a separate section of the Army organization. He retired Apr. 4, 1920. For his services during the War he was awarded the Distinguished Service Medal by the United States and was made a Commander of the Legion of Honor by France.

From Nov. 26, 1923, General Sibert was chairman and chief engineer of the Alabama State Docks Commission, which had charge of the construction of a system of piers and terminals in Mobile costing \$10,000,000. In July, 1928, he served, by appointment of President Herbert Hoover, as chairman of a board of engineers and geologists to report on the economic and engineering feasibility of Boulder Dam.

He was a member of the American Society of Civil Engineers and of the American Association of Port Authorities, which he served as president during 1929-30.

SIERRA LEONE, sī-ēr'a lē-ō'nē. A British West African crown colony and protectorate. Total area, 27,925 square miles, of which the part governed as a colony (Sierra Leone peninsula; the Tasso, Banana, Turtle, and York Islands; and the township of Bonthe on Sherbro Island) equaled 260 square miles. Total population (1931 census), 1,768,479 of whom 96,422 were in the colony. Free-town, the capital (55,359 inhabitants in 1931), is the greatest seaport in West Africa and an Imperial coaling station.

Production and Trade. Kola nuts, palm kernels, palm oil, ginger, diamonds, gold, platinum, pissava, hides, and rice were the main products for export. In 1934, total imports were valued at £805,227; total exports, £1,011,875 of which palm kernels accounted for £360,780. Cotton goods, apparel, coal, hardware, provisions, and tobacco were the chief imports.

Government. For 1934, revenue (including £72,500 from the Colonial Development Fund) amounted to £598,839; expenditure, £603,208. The colony and protectorate were administered by a governor assisted by an executive council and a legislative council. Governor in 1935, Sir Henry Monck-Mason Moore.

SILESIA, sī-lē'shī-a; -sha. (1) A part of the province of Moravia and Silesia in Czechoslovakia. (2) A county of Poland. (3) The two Prussian provinces—Lower Silesia and Upper Silesia.

SILK. Though the rapid growth of the rayon industry has continued its inroads into the silk industry, there was an appreciable upward rise in silk consumption in the United States during 1935. Production figures are not available, but deliveries

to the United States rose to 497,143 bales as compared with 461,706 bales in 1934. The increased demand, together with a curtailment of production in Japan and an increased consumption in Japan, effected a rise in price of raw silk from a low of \$1.31 per pound on March 12, to a high of \$2.14½ in November, with the year closing at \$2.04½.

SILVER. According to the advance summary issued by the U.S. Bureau of Mines, the mine production of silver in the United States and the Philippine Islands totaled 48,047,899 oz., an increase of 46 per cent above the production in 1934, which totaled 32,982,433 oz. The value of the 1934 production at \$0.46+ per ounce was \$21,321,976 and the value of the 1935 production at the weighted average of \$0.738 was \$35,459,349, an increase of \$14,137,373 or 66 per cent. Production of silver in 1933 was 23,317,159 oz., valued at \$0.35 per ounce, or \$8,161,006. The increase in 1935 over 1933 was 106 per cent in quantity and 334 per cent in value.

Producers of newly mined silver in the United States in 1935 began the year under the stimulus of the Government price of \$0.646+ (one-half of the coinage value of \$1.2929+). Acting under the President's proclamation of Dec. 21, 1933, and the Silver Purchase Act of 1934, the Secretary of the Treasury on April 10 raised the price paid to \$0.7111 (55 per cent of the coinage value) and on April 24 to \$0.7757 (60 per cent of the coinage value). See UNITED STATES under *Administration*.

By States and regions, the mine production of silver in the United States for the years 1934 and 1935 is shown in the accompanying table.

	Ounces		Per cent
	1934	1935	
Western States and Alaska:			
Alaska *	168,868	203,465	+ 20
Arizona	4,448,474	6,375,000	+ 43
California	844,413	1,117,700	+ 32
Colorado	3,475,661	4,605,845	+ 33
Idaho	7,394,143	10,150,000	+ 37
Montana	4,006,468	9,370,000	+ 134
Nevada	3,057,114	4,280,000	+ 40
New Mexico	1,061,775	1,052,900	- 1
Oregon	46,560	112,000	+ 141
South Dakota	99,741	142,513	+ 43
Texas	851,442	976,900	+ 14
Utah	7,111,417	9,133,900	+ 28
Washington	44,120	50,900	+ 15
Wyoming	710	793	+ 12
Eastern States			
Alabama	361	395	+ 9
Georgia	48	75	+ 56
New York .....	..	21,750	.....
North Carolina	9,710	7,021	- 28
Pennsylvania	6,230	4,600	- 26
South Carolina	487	177	- 61
Tennessee	61,148	34,119	- 44
Virginia	103	63	- 39
Central States:			
Illinois	310	3,147	+ 915
Michigan	529	..	.....
Missouri	63,066	101,024	+ 60
Philippine Islands *	226,524	303,604	+ 34
Puerto Rico	11	8	- 27
Total	32,982,433	48,047,899	+ 46

* Refinery receipts.

The American Bureau of Metal Statistics estimates the world production of silver in 1935 at 204,084,000 oz. The estimate, however, is exclusive of the production in Katanga, which amounted to 3,369,300 oz. in 1934. If that region produced the same amount in 1935, the total for the world in 1935 would be about 207,000,000 oz. as compared with about 185,588,000 oz. in 1934. Mexico is given as the greatest producer with 75,606,000 oz. The Canadian output, according to the official estimate

of the Dominion Bureau of Statistics, was 16,413,482 oz., slightly under the output of 1934.

SILVER PURCHASE ACT. See **CHINA** under *History*; **UNITED STATES**.

SIMMONS COLLEGE. A nonsectarian college for women in Boston, Mass., founded in 1899. The enrollment on Nov. 1, 1935, was 1515. The faculty numbered 145. The productive funds of the institution amounted to \$3,419,999, and the income for the year was \$534,299. There were 56,700 volumes in the library. President, Bancroft Beatley, A.M.

SINGAPORE. See **STRAITS SETTLEMENTS**.

SINKIANG. See **CHINA** under *History*.

SINUS PRINTS. See **MEDICAL JURISPRUDENCE**.

SKATING. Figure. Miss Sonja Henie of Norway and Karl Schafer of Austria remained supreme in figure skating during 1935, both retaining their oft-won world's titles. These two demonstrated their superiority with ease and practically assured their countries of decisive triumphs in the 1936 Olympic games at Garmisch-Partenkirchen. Miss Liselotte Landbeck of Vienna was second to Miss Henie in the European championships and Miss Cecilia Colledge of England second in the competition for world's honors.

A new national senior champion was crowned at New Haven when fifteen year old Robin Lee conquered the veteran champion, Roger F. Turner of Boston. Miss Maribel Vinson of Boston, returning to competition after a year's absence, easily won the women's championship. The men's junior title went to Eric Reiter, of Minneapolis, and the women's junior was taken by Miss Polly Blodgett, of Boston. Miss Vinson and George Hill took the senior pairs honors and the junior pairs title was captured by Miss Jeanne Schulte and Oliver Haupt, Jr., of St. Louis. Miss Ardelle Kloss of Brooklyn and Bruce Mapes, also of Brooklyn, were supreme in the Middle Atlantic competition. The season came to a glorious end when most of the leading Europeans gave an exhibition at Madison Square Garden, New York.

Speed. Allan Potts, of Brooklyn, a topnotcher in the sport for ten years, was outstanding in the speed skating field, winning the Middle Atlantic, New York State, Interstate and Brooklyn honors. The world's championship went to Michael Staksrud of Norway, and the national championship was taken by Marvin Swanson of Minneapolis. Miss Kit Klein of Buffalo won the women's national honors. The North American indoor crown went to Alex Hurd, of Kirkland Lake, Ont., and women's honors were taken by Miss Leila Brooks of Toronto. Miss L. S. Nielsen of Norway was women's world's all around champion.

SKIDMORE COLLEGE. A nonsectarian college for women at Saratoga Springs, N. Y., founded in 1911. The enrollment for the autumn of 1935 was 703. The faculty numbered 75. The endowment amounted to \$781,314, while the income on an accrual basis was \$26,760. The library contained 46,061 books and pamphlets. President, Henry T. Moore, Ph.D.

SKIING. The severe and snowy winter of 1935 served to make the public of the Eastern United States ski conscious and the sport grew amazingly. The unusually long winter permitted the United States Associations to carry out their competitive plans in full.

Roy Mikkelsen regained the national jumping crown at Canton, S. D., and Ottar Satre, of Salisbury, Conn., won the cross-country title. He also won the Eastern jumping championship at Rum-

ford, Me. Sverre Fredheim of Minneapolis won the Olympic trial on the giant Ecker Hill at Salt Lake City. Hannes Schroll, an Austrian, won the Olympic trials in the slalom and downhill events, with Robert Livermore, of Boston, second in the slalom. Richard Durrance, of Dartmouth College, was third in the slalom and second in the downhill running. Ottar Satre won the combined jumping and cross-country event at Lake Placid.

SLOVAKIA. See **CZECHOSLOVAKIA**.

SMITH COLLEGE. A nonsectarian college for women in Northampton, Mass., founded in 1871. The enrollment for the autumn of 1935 was 2026, while that for the summer was 332. There were 229 faculty members. The productive funds amounted to \$6,308,721.17, and the income from funds was \$265,679.76. The volumes in the library numbered 229,348. President, William Allan Neilson, Ph.D., LL.D., L.H.D., Litt.D.

SMITHSONIAN INSTITUTION. An organization founded in 1846 according to the terms of the will of James Smithson of England, who in 1826 bequeathed his property to the United States of America "to found in Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." The enterprises, supported wholly by Congressional appropriations but administered by the institution, include the United States National Museum, National Gallery of Art, Bureau of American Ethnology, International Exchange Service, National Zoological Park, and Astrophysical Observatory. It also administers the Freer Gallery of Art.

During 1935 the Astrophysical Observatory and its three observing stations continued the study of the relation of the periodicities in the weather to similar periodicities found in the variation of the solar constant of radiation. In the Division of Radiation and Organisms, experiments were carried through relating to the growth of tomato plants under controlled conditions of temperature, humidity, and radiation; the growth of wheat outdoors with controlled quantities of carbon dioxide, and the dependence of the growth of wheat and of algae on the wave lengths of radiation. In anthropology, special attention was given to the problem of the so-called Folsom Man, to whom is attributed the earliest known phase of aboriginal American culture. In Colorado, a Smithsonian expedition unearthed for the first time a variety of implements belonging to that culture, including many typical Folsom points. The Walter Rathbone Bacon traveling scholarship was awarded to Dr. Richard E. Blackwelder for an intensive study of the staphylinid beetles of the West Indies.

The expendable income of the Institution for 1935, consisting of income from investments, income from miscellaneous sources, and gifts for special objects (excluding income from the Freer endowment) was \$178,587. Its endowment funds (exclusive of the Freer endowment) totaled \$1,808,107. There were published by the institution and the government bureaus under its direction, 64 volumes and pamphlets, of which 124,186 copies were distributed to libraries, educational institutions, and individuals. Among these were: *Archeological Investigations in the Bay Islands, Spanish Honduras*, by William D. Strong; *A Folsom Complex: Preliminary Report of Investigations at the Lindenmeier Site in Northern Colorado*, by Frank H. H. Roberts, Jr.; the second volume in the Freer Gallery of Art's series of Oriental Studies, *A Descriptive and Illustrated Catalogue of Miniature Paint-*

ings of the Jaina Kalpasūtra as Executed in the Early Western Indian Style, by W. Norman Brown; and several papers embodying the results of the investigations of the Division of Radiation and Organisms. The secretary of the institution is Charles G. Abbot, D.Sc.; the assistant secretary, Alexander Wetmore, Ph.D.

SOCCER. Mainly because of a visit to the United States by a picked team from the Scottish Football Association, the game of soccer was distinctly on the upgrade in 1935 and made a satisfying start on the new season. The visitors played four games in the United States, defeating the First Germans at Philadelphia, the American League before 22,000 at the Polo Grounds in New York, the Illinois All-Stars at Chicago, and an all-Eastern team at Newark. Another notable tour was made by the New York Americans, who played in Mexico, winning three games and losing the same number.

The National Challenge Cup was taken by the Central Breweries Eleven of St. Louis, after a three-game final with the Pawtucket Rangers, winner in the Eastern section. St. Louis won the first game, 5-2, tied the second 1-1, and lost the third, 3-1, but took the coveted cup on total goals, 7 to 6. All three games were well attended as were most of the professional games throughout the country during the year.

The Amateur Cup of the United States Football Association was captured by the W. W. Riehl Soccer Club of Castle Shannon, Pa., which eliminated the Fall River All-Americans in the final to succeed the Philadelphia Germans, 1935 leaders of the American League, as champions. The Reliable Stores of New Bedford, Mass., downed the Greenock West of Scotland Juniors for the junior all-Eastern championship, and the St. Mary's Celtics of Brooklyn won the New York State Association cup series from Greenock West of Scotland.

SOCIAL CREDIT. See CANADA under *History*; ALBERTA.

SOCIAL ECONOMICS AND INSURANCE. See CHILD LABOR; CHILD WELFARE; CO-OPERATION; LABOR LEGISLATION; MINIMUM WAGE; OLD AGE PENSIONS; STRIKES AND LOCK-OUTS; UNEMPLOYMENT; WOMEN IN INDUSTRY; WELFARE WORK; WORKMEN'S COMPENSATION; LITERATURE, ENGLISH AND AMERICAN.

SOCIALISM. The long expected split in the ranks of the American Socialist Party took place late in 1935, the final break being marked by the action of the New York City left-wing group in walking out of a session of the New York City Central Executive Committee. The leader of the left-wing was Norman Thomas, twice Socialist candidate for President, and while the issue was far from settled as the year drew to a close, it seemed likely that he would carry the majority of the party members with him and a good deal of the party machinery and property. On the other hand, the leadership of the Old Guard, as it was called, was in the hands of Louis Waldman, chairman of the N. Y. State Executive Committee, Algernon Lee, president of the Rand School, and Abraham Cahan, editor of the *Jewish Daily Forward*.

The dispute between the two wings had been developing for many years. A premonitory disagreement developed at the party convention in 1932 when an abortive effort to unseat Morris Hillquit as chairman of the national executive committee was made. The quarrel came out in the open as

the party group which styled itself the Militants began an aggressive campaign to radicalize the party position. At the Detroit convention in 1934 the nature of the differences could no longer be concealed, for when the leftists introduced a resolution declaring that "they [Socialists] will meet war and the detailed plans for war already mapped out by the war-making arms of the government, by massed resistance" and "if the capitalist system should collapse in a general chaos and confusion which cannot permit of orderly procedure, the Socialist party, whether or not in such a case it is a majority, will not shrink from the responsibility of organizing and maintaining a government under the workers' rules," it was bitterly fought by Messrs. Waldman and Lee and advocated with equal fervor by Norman Thomas, Devere Allen, its reputed author, and Leo Krzycki, chairman of the national executive committee, with the result that it was adopted. Moreover, the left group won the majority of the places on the national executive committee, but the control of the powerful New York State organization remained in the hands of the Old Guard. Socialist strength in the United States, based on members paying dues, was concentrated in New York, New England, New Jersey, and Pennsylvania, with "spots" elsewhere, as in the city of Milwaukee.

When Norman Thomas carried his campaign to the point of a joint debate between himself and Earl Browder, Communist Party leader, on Thanksgiving Eve, 1935, as a means of exploring the possibility of a united front on general and specific issues, the Old Guard immediately declared that the debate was a direct violation of the rules of the party, and moved to expel the left faction. Yet it was made clear during the debate that the left-Socialists and the Communists did not see eye to eye on crucial questions, and Mr. Thomas was at great pains to make clear that he still remained a Socialist in philosophy.

Instead of waiting for formal expulsion, the leftists bolted the party in the fashion mentioned above, and immediately began a campaign of speaking and publishing in an effort to wrest control of the organization from the Old Guard. The organ of the group became the *Socialist Call*, established some months earlier when the *New Leader*, edited by James Oneal, declared for the Old Guard and pursued an anti-leftist and anti-Communist line. The position of the Thomas group may be summarized as a demand that the American Socialists develop a clean, inclusive, aggressive Socialist party, devoted to spreading socialist doctrine, working with the unemployed groups, fighting war and preparations for it, and looking forward to the time when it will be necessary to take power even though a minority. The leftists denied that they were under Communist influence, though they did not reject the prospect of a united front with the Communist Party, and specifically repudiated the charge that they advocate an insurrectionary policy.

On Dec. 28 and 29, 1935, the Thomas group held a convention at Utica, New York, to lay plans for creating a new State organization and launching an aggressive campaign for membership. Eighty-six official delegates were present, 45 from up-State and 41 from New York City. A provisional committee was named, and included the following leaders: Lewis Tonks of Schenectady, Fred J. Smith of Jamestown, Harold Siegel and Brendon Sexton of New York City, Richard Briggs of Rochester, George Brickner of Buffalo, and Alex

Benedict of Geneva. At the same time it was announced that the National Executive Committee would consider the New York State struggle at a meeting early in 1936. The leftists were to present their case at that time, but the Old Guard indicated that it would not do likewise, alleging that the national leaders were in the control of the leftists. As a counter move, the Old Guard reiterated its demand that such national figures as Clarence Senior and Leo Krzycki be forced out of office for violating the party rules. There was, therefore, little prospect that the differences would be composed, and the outlook was for the creation of left- and right-wing Socialist parties in the United States. See COMMUNISM, FASCISM.

SOCIAL PROGRESS, INTERNATIONAL ASSOCIATION FOR. An international association, of which the Association for Labor Legislation is the American section, created in 1925 by amalgamating three former allied organizations, the International Association for Labor Legislation, the International Social Insurance Committee, and the International Association on Unemployment. See LABOR LEGISLATION, AMERICAN ASSOCIATION FOR.

SOCIAL SECURITY ACT. See UNEMPLOYMENT; CHILD WELFARE; LABOR LEGISLATION; UNITED STATES under Congress.

SOCIETY ISLANDS. See OCEANIA, FRENCH ESTABLISHMENTS IN.

SOIL EROSION. See RECLAMATION; SOILS.

SOILS. Land utilization, land classification, valuation, and adaptation, conservation, development, and use of soil and soil moisture resources, soil chemistry, soil fertility, soil physics, soil microbiology, and the dynamic properties of soils affecting tillage, traction, and erosion continued to be among the more important topics receiving special attention by soil investigators.

The movement toward more discriminating use of soils continued. The New York Cornell Experiment Station completed studies of soils in relation to fruit growing, thereby making it possible to eliminate from 80 to 90 per cent of the poor orchard sites. The New Jersey Stations completed the soil survey of the State, together with a summary review of the soil resources to serve as a basis for crop planning and soil adaptation. A national study of adjustment in farming practices based upon soil types in major farming areas was being completed by the U. S. Department of Agriculture and the state agricultural experiment stations.

The National Resources Board appointed a land-planning committee which issued a comprehensive report early in the year dealing with land planning in its immediate as well as in its more remote bearings on human welfare. In line with this report the Federal Government made a substantial beginning in the acquisition of lands unsuitable for farming and broadened the programme to include the purchase of other lands not used in ways consistent with the general welfare.

The U. S. Bureau of Chemistry and Soils continued the nation-wide inventory of the soils and soil fertility resources of the United States. It conducted soil surveys in 74 separate areas distributed over 28 States and two territorial possessions. Detailed surveys aggregating 21,030 square miles and reconnaissance surveys to the extent of 2660 square miles were covered during the year, bringing the total acreage for the detailed survey to nearly 595,000,000 and for the reconnaissance survey to more than 407,000,000. This brought the total area covered by the soil survey to somewhat more than one-half the arable lands of the Nation.

Basic information accumulated relating to the selection and use of domestic peat deposits in place of imported peat products for improving the physical condition of arable mineral soils. The New York Cornell Experiment Station was engaged in a study of the effect of composting on the chemical and biological changes in peat. A study was completed of ionic exchange in peat soils indicating pronounced differences in the percentage base saturation of such soils which was found to be intimately related to soil reaction and calcium content. Studies of potential changes induced by liming suspensions of peat soil indicated that a soil low in oxygen will develop abnormally low potentials when given any treatment that will stimulate the activity of micro-organisms, according to the North Carolina Experiment Station. The New York Cornell Experiment Station completed a study of acidity, antacid buffering, and nutrient content of forest litter in relation to humus and soil.

Soil impairment by erosion and storm run-off continued to be recognized as one of the most important problems confronting American agriculture. On Mar. 25, 1935, the Soil Erosion Service was transferred intact from the U. S. Department of the Interior to the U. S. Department of Agriculture. On March 27 the U. S. Secretary of Agriculture ordered the unification of all U. S. Department of Agriculture activities pertaining to soil erosion under the Soil Erosion Service. This automatically expanded the Service to include the erosion control experiment stations of the U. S. Bureaus of Chemistry and Soils and Agricultural Engineering, the erosion control nurseries of the U. S. Bureau of Plant Industry, and the Emergency Conservation Work camps assigned to the Forest Service for erosion control work. On April 27 an act of Congress was approved providing permanently for the control and prevention of soil erosion and authorizing the incorporation of the Soil Erosion Service into a Soil Conservation Service.

According to the *Report of the Chief of the Soil Conservation Service for 1935*, the erosion control programme under way covered more than 51,500,000 acres of land in 41 States. Within 42 of the demonstration areas erosion control treatment was completed on 598,896 acres, thus safeguarding 3074 farms against soil losses.

Three additional erosion experiment stations were established so that at the end of the year 13 stations were being operated by the Service in cooperation with State agricultural experiment stations to determine the character of soil erosion and to develop preventive measures. In addition three projects were operated on large areas of Federally owned land in New Mexico and Arizona.

The most important survey work of the year was the completion of a nation-wide reconnaissance erosion survey and the presentation of the results in each State by State reports and in erosion maps of the States and the United States. The survey covered every county in the country and included not only the character and distribution of soil erosion, but the degree of slope, prevailing soil type, and present use of the land. Evidence of accelerated or man-induced erosion was found either of frequent occurrence or as a prevailing characteristic within an area comprising 832,083,436 acres. The survey revealed that the greater part of an area of 44,213,887 acres outside of the arid western region had been essentially destroyed by wind or water erosion. A large area was seriously affected by

wind erosion principally in the Middle Western States east of the Rocky Mountains and extending from Texas to North Dakota.

Early in 1935 approximately 274,000,000 trees were being produced for erosion control purposes. Six nurseries were established in the Great Plains and Western States to serve as centres for the study of native vegetation and its use in erosion control.

The Department of Agriculture continued investigations on erosion control in coöperation with the State agricultural experiment stations. The essential character of vegetation as a controlling factor in soil and water losses and as a necessary supplement to terracing continued to stand out prominently.

Strip cropping continued to show marked possibilities for the control of sheet erosion between terraces. The Tennessee Valley Authority (TVA) was coöperating with the agricultural experiment stations of the States within the Valley in a regional study of soil and water conservation and use, which for the first time was answering many of the fundamental questions of soil dynamics, physics, and chemistry involved as a basis for the development of permanent procedure in erosion and run-off control. The Missouri Agricultural Experiment Station completed a study of the physico-chemical properties of soils affecting erosion, indicating that the physical properties of soils affecting permeability and ease of dispersion are paramount factors influencing the erosiveness of soils. The U.S. Bureau of Chemistry and Soils was studying base exchange and related properties of soils from the erosion experiment stations and issued a second report on the physical and chemical characteristics of these soils. The bureau also completed a preliminary study of soil blowing and dust storms, indicating the importance of proper selection of lands for various uses and the wider adoption of superior tillage methods.

The demand for more accurate and specific information regarding fertilizer requirements of crops on soils of known character again increased as land use practices were perfected and put into use. Soil fertility studies by both the U.S. Department of Agriculture and the State agricultural experiment stations continued to concentrate in that direction with reference to the needs of major field, truck, and fruit crops. The Illinois Agricultural Experiment Station summarized the results of long-time experiments on 40 experimental fields indicating an inverse relationship between natural productivity and response to limestone applications. The Indiana Agricultural Experiment Station further developed the use of rapid chemical tests on soils and plants as aids in determining fertilizer needs.

The Vermont Agricultural Experiment Station completed a study of the principal Vermont pasture soils with reference to their content of available potassium and phosphorus and their lime requirements. The Wisconsin Agricultural Experiment Station developed a rapid chemical method for determining the readily available potash of soils, the Colorado Station developed the use of electro dialysis for estimating the availability of phosphates in calcareous soils, and the Pennsylvania Station completed a study of phosphorus penetration and availability in soils, indicating that rock phosphate moves more readily through soils than superphosphate. The California Station completed a study of factors influencing phosphate fixation in soils and the Virginia Truck Station perfected micro-chemi-

cal soil tests in connection with vegetable crop production.

Information continued to accumulate at the State agricultural experiment stations and the U.S. Bureau of Chemistry and Soils on the character, functions, and behavior of soil colloids with particular reference to base exchange phenomena and their influence on availability of soil nutrients to plants, impermeability of semi-arid alkali soils and its correction, the physics and mechanics of soil preparation, and the erosiveness of soils. The Missouri and New Jersey Agricultural Experiment Stations and the U.S. Bureau of Chemistry and Soils continued contributions to the knowledge of soil colloidal behavior with particular reference to the activity of colloidal phosphates, the electrokinetics of hydrous oxides and their ionic exchanges, and liquid intake and swelling by soil colloidal materials.

The Missouri Station developed a method for the quantitative measurement of hardpan formation in sand clay soils. The U.S. Bureau of Chemistry and Soils continued the study of soils and colloids with reference to soil classification and completed a study of the detailed chemical composition of typically representative profiles of the great soil groups the report of which was in press. It was clearly demonstrated that in the great morphological groups the chemical composition of the active component of the soil, the colloid, is characteristic for each group and that for proper control of the soil the treatment must be adapted to the particular characteristics shown. A method of simplification of soil classification was indicated which will assist in the solution of land use problems.

A study of the chemical composition of the soils of the semi-arid areas also was completed, indicating that soils and colloids of these areas owe their characteristic differences primarily to the parent material. A study was nearing completion of the base exchange capacity, neutralization curves, and the maximum acids shown by the colloids of the great soil groups. Information continued to accumulate on the dominating influence of colloids on the capacity of soils for the retention and distribution of moisture and the California Agricultural Experiment Station developed a new and shorter method of measuring the aqueous vapor pressure of soils. The Missouri Agricultural Experiment Station established some of the functional relationships between soil properties and rainfall. The knowledge of the basic relationships between the dynamic properties of cultivated soils and the principles of design of moldboard plows was further strengthened.

The investigation of the distribution of selenium in soils was continued, its presence being demonstrated in serious quantities in both soils and vegetation in seven States. An investigation was completed which threw further light on the effect of soil colloids of varying composition upon the availability of arsenic as affecting plant growth. The results showed that the degree of inhibition of plant growth and yields varies widely with soil type and pointed to the necessity of careful consideration of the quantities of arsenic which may safely be used in insect control. Studies of infertile soils were completed so far as they concern a group of soils derived from serpentine and which cover wide areas in the United States and elsewhere. The results showed that, in addition to the unfavorable physical characteristics shown, these soils contain abnormally large quantities of magnesium, chromium, and nickel.

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SOLOMON ISLANDS. An archipelago in the Pacific, east of New Guinea (Papua). See NEW GUINEA, TERRITORY OF; SOLOMON ISLANDS, BRITISH.

SOLOMON ISLANDS, BRITISH. A British protectorate in the South Pacific, comprising the islands of Guadalcanal, Malaita, Ysabel, San Cristoval, New Georgia, Choiseul, Shortland, Vella

Lavella, Kulambangra, Santa Cruz, Vanikoro, Rennell, and numerous smaller islands (including the Lord Howe atoll). Total land area 11,000 sq. miles; population (1931 census), 94,066 including 478 Europeans. Capital, Tulagi.

The main products were copra, trochus, ivory nuts, timber, green snail shell, and bêche-de-mer. In 1934, exports totaled £111,669; imports, £158,776; revenue amounted to £53,039; expenditure, £56,822. Administration was under a resident commissioner (in 1935, F. N. Ashley) acting under the High Commissioner for the Western Pacific.

SOMALILAND (sô-mă'lê-lând), BRITISH. A British protectorate on the Gulf of Aden in Africa. Area, 68,000 sq. miles; population (estimated), 344,700 of whom 2683 were non-natives. The principal towns were Berbera (capital) with 30,000 (cold season) and 15,000 (hot season) inhabitants; Hargeisa, 20,000 to 15,000; Burao, 10,000; Zeila, 5000.

Trade. Livestock raising is the chief industry. Exclusive of goods in transit and specie, exports for 1934 totaled Rs1,832,397 (rupee averaged \$0.3788 paper for 1934); imports, Rs3,580,851.

Government. During 1934, revenue amounted to £106,169; expenditure, £167,656; public debt, £236,000 (Jan. 1, 1935). The protectorate was under the administration of the Governor and Commander-in-Chief (Major Sir A. S. Lawrance, appointed June 18, 1932).

Following the outbreak of the Italo-Ethiopian war, the British closed the Somaliland-Ethiopian border and mobilized troops to prevent the spread of the fighting across the frontier. See ETHIOPIA under History.

SOMALILAND, FRENCH. A French colony in Africa. Area, 8880 sq. miles; population (1931), 68,965 including 46,687 Somalis, 2992 Arabs, 18,552 Danakils, 499 Hindus, and 628 Europeans. Djibouti (capital), had 11,336 inhabitants in 1931. The coast fisheries, salt mines, and inland trade were the main sources of livelihood. In 1933, total imports were valued at 130,025,000 francs (cotton goods, cattle, sugar, and coal were the main items); total exports, 120,695,000 francs of which a part represented Ethiopian goods brought down by the railway from Addis Ababa (franc averaged \$0.0501 for 1933). Coffee, hides and skins, animal wax, and salt were the chief exports. The local budget for 1933 was balanced at 13,358,100 francs. A governor, assisted by an administrative council, administered the colony.

SOMALILAND, ITALIAN. An Italian colony in East Africa. Area, 194,000 sq. miles; population (1931), 1,010,815 including 1613 Italians and 28 other Europeans. Mogadiscio (capital) had 29,562 inhabitants.

Production and Trade. Agriculture and cattle rearing were the main occupations of the people. Sesame, cotton, resin, oil, kapok, hides, and butter were exported. Imports consisted of iron, machinery, timber, and provisions. In 1933, imports were valued at 58,662,580 lire; exports, 30,272,870 lire (lira averaged \$0.0667 for 1933; \$0.0856 for 1934). Highways extended 6200 miles; railways, 70 miles. There were 23 wireless stations in the colony inclusive of one, at Afgoi, able to communicate directly with Italy.

Government. In the budget for 1934-35, revenue was estimated at 74,472,000 lire (including a state contribution of 48,750,000 lire); expenditure, 71,478,993 lire (including military, 26,754,000 lire). The colony was administered by a governor under the direction of the Italian Minister for the Colo-

nies. Governor, Gen. Rudolfo Graziani (appointed Mar. 6, 1935).

History. Italian Somaliland during 1935 served as the base for the Italian invasion of Ethiopia from the south. Led by General Graziani, the Italian southern army advanced in conjunction with the main offensive launched from the Eritrean border into northern Ethiopia. For details of the campaign, see ETHIOPIA under *History*.

SOUND. See PHYSICS.

SOUTH, UNIVERSITY OF THE. A Protestant Episcopal institution for the higher education of men in Sewanee, Tenn., founded in 1857. The enrollment for the autumn term of 1935 was 234, of whom 212 were registered in the college and 26 in the theological school. The faculty had 29 members. The income from productive funds was \$55,147, while the receipts from all sources totaled \$356,040. The library, which was enlarged during the year, contained 46,796 volumes. President, Benjamin Ficklin Finney, LL.D.

SOUTH AFRICA, UNION OF. A self-governing dominion of the British Commonwealth. Capital, Pretoria; seat of the legislature, Capetown.

Area and Population. With an area of 471,917 square miles, the Union had a population at the 1931 census of 1,828,175 Europeans and 5,409,092 non-Europeans. The area and estimated mean population of the Provinces, by racial divisions, on June 30, 1935, are shown in the accompanying table.

AREA AND POPULATION BY PROVINCES

(Estimated, June 30, 1935)

Province	Area, sq. miles	Europeans	Bantus	Asiatics and mixed
Cape of Good Hope	276,739*	781,900	1,920,900	558,300
Natal	35,284	191,700	1,423,300	182,700
Transvaal	110,450	763,200	1,928,100	55,700
Orange Free State	49,647	207,400	570,400	16,700
Total ...	472,550	1,944,200	5,842,700	813,400

* Excluding Walvis Bay (area, 430 sq. miles), attached to Cape of Good Hope Province but administered by South-West Africa.

Living births of Europeans in 1934 numbered 45,187; deaths, 18,587; marriages (1933), 16,709. Estimated populations of the chief cities in 1932 were: Johannesburg, 355,600; Capetown, 274,000; Durban, 121,000; Pretoria, 90,700; Port Elizabeth, 78,900; Bloemfontein, 52,800; Benoni, 51,300; Germiston, 46,900; East London, 44,800; Pietermaritzburg, 41,200; Boksburg, 41,900; Kimberley, 39,200. Of the 1931 European population, about 55 per cent were of Dutch origin and about 36 per cent British.

Education. Elementary education is compulsory. In November, 1934, there were 9867 state and state-aided primary and secondary schools (4782 for Europeans, with 364,385 pupils; and 4085 for non-Europeans, with 430,201 pupils), and 1314 private schools (293 for Europeans, with 23,131 pupils; and 1021 for non-Europeans, with 41,634 pupils). The five universities and university colleges enrolled an average of 7209 students in 1934.

Production. South Africa has about 10,000,000 acres of arable land, of which some 6,000,000 acres are devoted to cereals. Forests cover about 2,600,000 acres. Yields of the chief crops in the 1934-35 season were: Wheat, 15,343,000 bu.; corn, 64,078,000 bu.; cane sugar, 358,738 short tons; tobacco (European cultivation), 19,401,000 lb.; cotton, 3,951,000 lb.; potatoes (1933-34, European cultivation), 5,475,000 bu. Wool production in 1934 was 113,400 metric tons. The output of creamery butter

in 1933-34 was 18,658,000 lb.; of cheese (factory production), 6,804,000 lb.

Mineral production in 1934 was valued at £50,532,000 (£52,534,000 in 1933), the chief products being: Gold, £44,516,000; coal, £3,154,000; diamonds, £1,438,000; copper, £263,000; asbestos, £203,000; platinum, £140,000; tin, £127,000; coke, £63,000. Mineral output, by quantity, was: Gold, 10,480,000 fine oz.; coal, 13,117,000 short tons; diamonds, 440,000 carats; copper, 9485 short tons; asbestos, 17,594 short tons; platinum, 22,889 troy oz.; tin, 908 short tons; silver, 1,002,000 fine oz.; osmiridium, 5845 troy oz. For the year ended June 30, 1933, manufacturing establishments employed 279,656 persons and produced goods valued at £90,427,000, of which £47,604,000 represented the value added in process of production.

In 1935, 10,776,684 fine oz. of gold, valued at £74,790,876, were mined. Working costs were £42,209,110; the estimated working profit, £32,581,766; dividends declared, £16,437,264.

Foreign Trade. General imports in 1934 were valued at £66,304,000 (£49,318,000 in 1933) and exports of South African products at £57,634,000 (£69,345,000 in 1933). Leading 1934 imports were (in 1000 South African pounds): Machinery, excluding farm and electrical machinery, £5355; cotton manufactures and piece goods, £4567; food and drink, £4264; hardware, £3753; electrical machinery and equipment, £3376; petroleum and products, £2512; iron and steel, £2329. The chief exports (in £1000) were: Gold, £56,131 (including the premium value of £21,529); wool, £8084; diamonds, £2815; fruit, £2590; hides and skins, £1401. Of the total value of 1934 imports, the United Kingdom supplied 48.1 per cent; the United States, 16.9; Germany, 4.8; and Canada, 3.9 per cent. Of the exports, the United Kingdom took 40.6 per cent, France, 10.1, Belgium, 8.9; Germany, 8.4; and Canada, 3.3 per cent.

Imports in 1935 totaled £75,132,000; exports, £73,625,000. United States figures for 1935 showed imports from South Africa of \$3,610,972 (\$2,859,066 in 1934) and exports to South Africa of \$52,864,813 (\$45,350,316 in 1934).

Finance. Budget returns for the year ended Mar. 31, 1935, showed a surplus of £2,969,621. Total revenues were £38,673,096 and expenditures, £35,703,475, as contrasted with £39,497,034 and £33,231,837, respectively, in the previous year. The public debt on Mar. 31, 1934, totaled £274,311,564 (funded, £268,816,037; floating, £5,495,527), compared with £276,100,000 on Mar. 31, 1935 (internal, £119,300,000; external, £156,800,000). The South African pound has the same par value as the pound sterling.

Communications. For the year ended Mar. 31, 1934, the South African railways carried 75,758,000 passengers and 20,423,000 short tons of freight (excluding livestock), the gross receipts totaling £23,706,000. The mileage of government lines on Mar. 31, 1935, was 13,175 miles and in the year ending on that date they showed a net surplus of £3,888,725, after meeting interest payments. There were also about 85,600 miles of highways and an airline connecting Capetown with Croyden, England, by way of Cairo. A Johannesburg-Capetown airline was opened in 1935. During 1934 a total of 1400 vessels of 5,555,812 tons entered South African ports in the overseas trade (1340 ships of 5,002,293 tons in 1933).

Government. Executive power is exercised by the Governor-General, appointed by the King, and the Executive Council, which is responsible to Par-

liament. Parliament consists of a Senate of 40 members (8 appointed by the Governor-General and 32 elected for 10 years) and a House of Assembly of 150 members elected by white male and female suffrage for five years, unless sooner dissolved. Governor-General in 1935, the Earl of Clarendon. Premier and Minister of External Affairs, Gen. J. B. M. Hertzog, who assumed office in 1924. In May, 1935, the Earl of Clarendon's appointment as Governor-General was extended for another term.

HISTORY

The fusion during 1934 of the Nationalist and South African parties in the United South African National party bore fruit in 1935 in the partial liquidation of the struggle between the Boer and British elements of the population. The programme of inter-racial cooperation still met the opposition of the Afrikaner republicans under Dr. D. F. Malan, former Minister of Interior in the Nationalist Government, and of a small die-hard section of Britishers, led by Col. C. F. Stalard, who opposed any weakening of South Africa's ties with Great Britain. But with a representation of 120 out of the 150 seats in the House of Assembly, the United party easily overrode all opposition during the session of Parliament which opened at Capetown on Jan. 11, 1935. The government was further strengthened in March when Tielman Roos, formerly Nationalist leader in the Transvaal and Union Minister of Justice, dissolved his small Central party formed in 1934 and urged his adherents to merge with the United party. On the other hand the Malantes attracted many young Afrikaner voters to their republican movement and were reported to have formed a connection with the Afrikaner Broederbond, a secret society opposing cooperation between the British and Dutch.

The Native Problem. Meanwhile the strong position of the government resulting from the healing of the British-Afrikaner breach enabled it to attack two major problems confronting the Dominion—the incorporation in South Africa of the British protectorates of Basutoland, Bechuanaland, and Swaziland and the relationship between whites and blacks in the Dominion. In May, 1935, the Joint Select Committee of both Houses of the Dominion Parliament issued the draft of two bills embodying the government's proposals for solution of the native problem. The draft was published to provide an opportunity for public discussion of the measures previous to their consideration by Parliament in 1936.

The Native Representation Bill prohibited further registration of natives as voters, but safeguarded the franchise rights of natives who had already registered. In place of direct participation in Union elections, the natives were given the right to choose four white Senators in addition to Senators already selected for their knowledge of native affairs. A native representative council of 22 members also was to be established for the whole Union. In Cape Province two members of the Provincial Council were to be elected by natives. The Native Trust and Land Bill provided for the establishment of a board of trustees to acquire about 14,000,000 acres of land from white owners for gradual settlement by natives.

Both bills were based upon the principle of segregation of the races, although in some respects they offered the natives wider opportunities for self-development than they had previously enjoyed. The native conferences assembled by the

government to discuss the measures expressed strong opposition. They protested that the Representation Bill abolished voting rights conferred on them 80 years before and that the Trust and Land Bill was not far-reaching enough to meet the native requirements for land. The natives received much support in their protests from liberal South Africans, but conservative opinion opposed any liberalization of the bills.

The Protectorates. The question of the transfer of Basutoland, Bechuanaland, and Swaziland to the Union was taken up by Premier Hertzog during his visit to London in May to attend the ceremonies marking the 25th anniversary of King George's reign. J. H. Thomas, the Secretary of State for Dominions, announced in the House of Commons on May 23 that he had discussed the matter fully with General Hertzog in the light of Britain's pledge to make the transfer eventually and of the "constitutional developments during the last few years." It had been agreed, he said, to "extend cooperation between the Union Government and the Administration of the Territories over as wide a field as possible, and in particular in all matters relating to the economic welfare and development of the Territories." General Hertzog stated that he was convinced this cooperation would within a reasonable time lead to the transfer of the territories to the Union in a manner satisfactory to all concerned.

Meanwhile the natives in the three protectorates were seriously alarmed at the prospect of incorporation in the Union. An appeal for continuation of the existing régime was issued to the Parliament and people of Great Britain early in 1935 by Tshekedi Khama, acting chief of Bechuanaland Protectorate. The British administrations in the Protectorates exercised their control indirectly through the native chiefs and protected the natives against white exploitation. Under the Union, the natives appeared destined to share the inferior legal, social, and economic status of the blacks already under South African jurisdiction. In answer to protests from British liberals, the London Government agreed not to transfer the protectorates until both the natives and Parliament had been consulted.

Imperial Defense Issue. With Europe drifting toward another war, the issue of South African participation in a conflict involving Great Britain became of foremost importance. The determination not to fight Britain's battles unless South African interests were believed to be involved was reflected in official and private utterances during the year. Minister of Defense Oswald Pirow stated at the Imperial Press Conference at Capetown on February 5 that "if any government were to attempt rashly to commit us to participation in another overseas war, there would be large scale disturbances and possibly civil war."

Nevertheless the increasingly aggressive character of the German and Italian demands for African colonies, backed by powerful military forces under dictatorial control, aroused the apprehension of South African leaders and enhanced the value of the British connection. While in London Premier Hertzog participated in the confidential discussions on foreign policy and defense held by the Dominion Premiers and British Cabinet Ministers. He returned to Capetown praising the "joyous solidarity" displayed by the British people during the Jubilee ceremonies. During the Anglo-Italian crisis of September and October the South African Government gave Britain full sup-

port at Geneva. Both Premier Hertzog and Minister of Interior Smuts, speaking at a United party congress at Bloemfontein in September, stressed the fact that if South Africa did not support Britain in her time of peril the Dominion would be forced to assume the full burden of self defense.

The Nazi movement in South-West Africa for the transfer of that mandated territory from the Union of South Africa back to Germany brought home to South Africans the dangers threatening from Europe. In November, 1934, the Legislative Council in South-West Africa had petitioned for the incorporation of that territory as the fifth Province of the Union. Hearing on this appeal began before a parliamentary commission in the middle of 1935. On September 3 the Attorney General of the territory submitted documents to the commission indicating that the Nazi party organizations among German residents in South-West Africa, although ordered dissolved in 1934, were continuing the movement for the restoration of German sovereignty with the cooperation of officials in Germany. Other witnesses testified that Jewish residents of the territory were subject to Nazi persecution and boycott. A warning that any attempt to abolish the mandate and incorporate South-West Africa in the Union would meet the opposition of certain League states was given by the Norwegian delegate to the League Assembly in September.

The Economic Situation. Economic activity in the Union continued at a high level during 1935, due primarily to the high price of gold in terms of depreciated currency. The gold mines were crushing increasing quantities of low-grade ore previously unprofitable to work. The resulting demand for labor, machinery, and materials provided a strong stimulus to production and trade in many other lines. The house building and office construction trades were fully occupied and the production of cement, furniture, clothing, footwear, and machinery continued to expand. The coking-coal requirements of the new steel industry improved the coal mining business.

The agricultural situation was satisfactory in the coastal areas of the Cape and Natal Provinces but locust swarms early in the year and a terrible drought in the Northern Transvaal greatly reduced the income of the farmers. The Union Government spent some \$6,000,000 in fighting the locusts. Damage from the drought was infinitely greater. From Pretoria to the Limpopo River the Transvaal for 300 miles along the Rhodesian border was reduced to a desert. Thousands of cattle perished and hundreds of farm families were left dependent upon the bounty of the government.

Fortunately the Union's budget situation continued highly satisfactory, due to the large revenue derived from taxation of the mines. The fiscal year 1934-35 closed with a surplus of £2,870,000 and the budget for 1935-36 provided for an all-round 10 per cent reduction in the income tax and other concessions. At the same time the government was able to carry forward an extensive public works programme, including road construction, irrigation and waterworks development, railway electrification, and harbor improvements.

Consult Fred Clarke and Ralph Thompson, "South Africa Becomes a Nation," *Current History*, July, 1935. See GERMANY, GREAT BRITAIN, and SOUTH-WEST AFRICA under *History*.

SOUTH AMERICA. See articles on the various South American countries; **EXPLORATION.**

SOUTH AUSTRALIA. A State of Australia. Area, 380,070 sq. miles; population (Mar. 31, 1935, estimate), 584,858 exclusive of 3579 (1933 census) aboriginals (1988 full-blood and 1591 half-caste). During 1934 there were 8459 births, 5403 deaths, and 4310 marriages. Chief towns (with 1933 census populations): Adelaide, 312,629; Port Pirie, 11,680; Mount Gambier, 5539. In 1934, the 1101 State schools had 90,905 students; the 185 private schools, 14,185 students; the university at Adelaide, 976 undergraduates and 1356 other students.

Production. In 1933-34 wheat (37,305,100 bu.; in 1934-35, 27,455,600 bu.), barley (5,254,280 bu.), oats (2,087,772 bu.), hay (524,191 tons), and vines (9,200,000 gal. of wine and 409,959 cwt. of dried fruits) were the main agricultural products. The 1935 vintage was estimated at 13,200,000 gal. Dairy production (1933-34), in long tons: butter, 8819.5; cheese, 2302; bacon and ham, 3237.3. Livestock in the State (Jan. 1, 1935): 7,885,000 sheep, 346,000 cattle, 109,000 horses, and 86,000 pigs. Wool production (1934) amounted to 79,288,903 lb. Mineral production (1934) was valued at £1,739,478—iron, salt, gypsum, phosphate rock, copper, and gold were the principal minerals. During 1933-34 from the 1733 factories, with 29,486 employees, the value of production was £8,641,477 (Australian £ averaged \$4.0095 for 1934; \$3.8886 for 1935).

Government. For the year ended June 30, 1935, revenue was £11,001,578; expenditure, £10,965,353; public debt, £105,319,536. Executive power was vested in a governor aided by an executive council. Legislative power was vested in a parliament consisting of a legislative council of 20 members and a house of assembly of 46 members. Governor in 1935, Maj.-Gen. Sir W. Dugan; Premier, R. L. Butler. See AUSTRALIA.

History. It was reported during September, 1935, that the drought which had existed in the northern cattle country of South Australia for the past 10 years had broken and pastoralists were looking forward to many good seasons.

SOUTH CAROLINA. Population. On Apr. 1, 1930 (Fifteenth Census), 1,738,765; July 1, 1934 (latest Federal estimate), 1,750,000; 1920 (Census), 1,683,724. Columbia, the capital, had (1930) 51,581 inhabitants, Charleston, 62,265.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu	Value
Cotton	1935	1,341,000	745,000 ^a	\$41,906,000
	1934	1,302,000	681,000 ^a	42,070,000
Corn	1935	1,765,000	25,592,000	16,635,000
	1934	1,730,000	20,760,000	18,892,000
Tobacco ..	1935	97,000	89,725,000 ^b	16,868,000
	1934	72,000	56,880,000 ^b	12,286,000
Oats	1935	407,000	9,768,000	5,177,000
	1934	388,000	6,596,000	4,683,000
Hay (tame) ..	1935	286,000	210,000 ^c	2,982,000
	1934	283,000	201,000 ^c	3,739,000
Sweet potatoes .	1935	59,000	5,192,000	3,375,000
	1934	54,000	4,428,000	3,188,000
Potatoes	1935	18,000	1,926,000	1,444,000
	1934	21,000	2,625,000	2,205,000

^a Bales. ^b Pounds. ^c Tons.

Education. The latest triennial reckoning of the number of inhabitants of school age (from 6 to 20 years) was that made in 1933, which showed a total of 677,587 (344,697 white and 332,890 Negro). There were enrolled in the public schools, in the academic year 1934-35, 488,721 pupils (259,475 white and 229,246 Negro). Of these, there were enrolled in the elementary grades or schools 422,788 (204,580 white and 218,208 Negro); in the high

schools, 65,933 (54,895 white and 11,038 Negro). The year's expenditures for public-school education totaled \$12,162,350, which included \$1,051,227 for service of debt and \$677,662 for capital outlay. Of all expenditure, \$10,606,526 was for white and \$1,555,824 was for Negro schools. The salaries of white teachers, for the year, averaged \$783; of Negro teachers, \$273.

The plans of public instruction that had earlier been put into operation in connection with economic emergency remained in effect in 1935. A grant of \$415,000 of Federal funds was made in order that the term of operation of rural schools might be lengthened. The State undertook to assure the payment of \$75 a month to teachers in such schools in 1935-36, for a duration of seven months.

Legislation. A law was enacted to permit the sale of alcoholic beverages by dealers at retail; they were required to obtain licenses costing \$200 a year. Manufacture was also permitted, and manufacturers and wholesalers were required to hold licenses costing \$200. The State budget totaled some \$7,000,000.

Political and Other Events. In the course of a strike in two cotton mills at Pelzer, pickets opposed the attempts of non-striking employees to enter the mills on the morning of September 2. Shooting occurred at both mills; one woman was killed, and about a score of other persons were wounded. National Guards, which had been stationed at the factories for 35 days, had been removed only a few days before the affray.

Officers. The chief officers of the State, serving in 1935, were: Governor, Olin D. Johnston; Lieutenant-Governor, J. E. Harley; Secretary of State, W. P. Blackwell; Treasurer, E. P. Miller; Attorney-General, John M. Daniel; Comptroller, A. J. Beattie.

Judiciary. Supreme Court: Chief Justice, John G. Stabler; Associate Justices, Jesse F. Carter, Milledge L. Bonham, D. Gordon Baker, E. L. Fishburne.

SOUTH CAROLINA, UNIVERSITY OF. A nonsectarian, State institution of higher education in Columbia, chartered in 1801. Enrollment for the autumn session of 1935 totaled 1345, in the summer session, 399. The faculty numbered 85. The State appropriation amounted to \$185,000 from July 1, 1935, to July 1, 1936. The library contained 130,000 volumes. President, Leonard T. Baker, LL.D.

SOUTH DAKOTA. Population. On Apr. 1, 1930 (Fifteenth Census), 692,849; July 1, 1934 (latest Federal estimate), 705,000; 1920 (Census), 636,547. Sioux Falls (1930), 33,362; Pierre, the capital, 3659.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	3,732,000	52,248,000	\$23,512,000
	1934	2,827,000	12,722,000	10,686,000
Wheat	1935	3,744,000	30,822,000	27,973,000
	1934	151,000	598,000	551,000
Hay (tame)	1935	815,000	831,000*	3,698,000
	1934	747,000	374,000*	6,059,000
Oats	1935	2,280,000	67,260,000	14,797,000
	1934	376,000	3,384,000	1,726,000
Barley	1935	2,270,000	43,130,000	13,370,000
	1934	237,000	1,778,000	1,245,000
Potatoes ...	1935	50,000	3,400,000	1,700,000
	1934	43,000	1,290,000	1,109,000
Rye	1935	470,000	7,050,000	2,256,000
	1934	82,000	328,000	220,000

* Tons.

Mineral Production. The chief part of the yearly value of minerals produced in the State came

in 1934, as usual, from a single gold mine, the Homestake, in Lawrence County. The production of gold in 1934, about 97 per cent from the leading mine, totaled 486,119 ounces, as against 512,404 for 1933; by value the yearly totals for the State were \$16,989,858 (1934, at \$34.95 an ounce) and \$13,097,040 (1933, at \$25.56). Some silver (\$64,479 by value for 1934) and a relatively small quantity of coal were produced.

Education. The number of the inhabitants of school age was reported at the end of 1935 as 207,216. In the previous academic year the enrollments of pupils in the public schools totaled 156,244. Of these, 118,940 were in common schools or elementary grades, and 37,304 were in high schools. The year's expenditures for public-school education throughout the State totaled \$10,513,959. While the enrollments ran lower, the reported total of expenditures exceeded that of the preceding year. Salaries of teachers, for the year, averaged \$642.28 in the elementary positions and \$980.70 in the high schools.

Charities and Corrections. The State's central administrative agency dealing with the care and custody of persons was in 1935 the Board of Charities and Corrections, composed of three members. This Board exercised control over the following institutions: State Penitentiary, having some 530 inmates, at Sioux Falls; State Hospital for the Insane, having some 1550 inmates, at Yankton; State Training School (about 140 inmates), at Plankinton; School for the Deaf (about 150), Sioux Falls; School and Home for the Feeble-Minded (about 500), Redfield; School for the Blind (about 50), Gary; State Tubercular Sanatorium (about 175), at Sanator.

Legislation. The Legislature altered the State's system of taxation by creating a tax on retail sales of merchandise, with which it superseded the State's income tax. The change went into effect on July 1.

Political and Other Events. The indigent unemployed of the State, according to the FERA's statement of March 1, received in 1934 direct support to a total cost of \$20,988,563, of which the FERA furnished \$19,621,713 or nearly 94 per cent and local governing units the remainder. The total for 1934 was at the approximate rate of \$30 to each inhabitant of the State and far outran the corresponding rate even for New York; it was 2½ times that for the entire nation. The exceptionally high proportion of destitute people in South Dakota was attributable to the ruin wrought by a succession of years of drought, culminating in the exceptionally severe crop failure of 1934.

Crops in the State were more abundant in 1935, on the other hand, than they had been in a number of years, and the farm value of most of them was relatively high. Nevertheless, at the height of the harvest season there were still 19,000 heads of families on the list of persons receiving direct support. At that time farmers complained that they could not hire help to bring in their crops. Accordingly Governor Berry ordered on July 22 that all grants of public support through the State relief organization be stopped until a sufficient number of unemployed men had come forward to take the harvesting jobs. The State's official census, taken on May 1, 1935, showed the number of inhabitants to have fallen off by 17,767 from the total for 1930; of the 69 counties, 54 shared in the loss of population, Tripp County losing some 2000.

Officers. The chief officers of the State, serving in 1935, were: Governor, Tom Berry; Lieutenant-

Governor, Robert Peterson; Secretary of State, Myrtle Morrison; Auditor, George O'Neill; Treasurer, Frank G. Siewert; Attorney-General, Walter Conway; Commissioner of Schools and Public Lands, Ben Strool; Superintendent of Public Instruction, I. D. Weeks.

Judiciary. Supreme Court: Judges, S. C. Polley, Frederick A. Warren, Everett D. Roberts, Herbert D. Rudolph, Dwight Campbell.

SOUTH DAKOTA, UNIVERSITY OF. A State institution of higher education at Vermilion, founded in 1882. The enrollment for the autumn term of 1935 was 1064 and for the summer session 447. The faculty and staff numbered 143. The operating income for the year was \$308,772.03. President, I. D. Weeks, A.M., LL.D.

SOUTH DAKOTA STATE COLLEGE. A State college of agriculture and mechanic arts at Brookings, founded in 1881. The enrollment for the autumn of 1935 was 916 collegiate and 208 secondary vocational students. The 1935 summer school had an attendance of 155. On the teaching staff were the equivalent of 97 full-time teachers in the collegiate department and eight in the secondary vocational. The income for 1934-35 was \$708,461. The library contained approximately 50,000 volumes and 15,000 pamphlets. President, Charles W. Pugsley, D. Agr.

SOUTHERN CALIFORNIA, UNIVERSITY OF. An institution of higher education for men and women in Los Angeles, Calif., founded in 1879. The enrollment for 1934-35, including summer session and extension classes, was 14,587. In the autumn of 1935 there were 550 members on the faculty. The endowment was \$1,534,000; the income from tuition and fees, \$1,508,500; and other income, \$156,713. The library contained 205,000 volumes. President, Rufus B. von KleinSmid, Sc.D., J.D., LL.D.

SOUTHERN RHODESIA. See RHODESIA, SOUTHERN.

SOUTH GEORGIA; SOUTH ORKNEYS. See FALKLAND ISLANDS

SOUTH-WEST AFRICA. A territory in Africa, administered under a League of Nations mandate as a part of the Union of South Africa. Total area (including the Caprivi Zipfel), 317,725 sq. miles; population (1934 estimate), 266,930 of whom 31,600 were Europeans. Chief towns (with white populations for 1926): Windhoek, the capital, 3809; Luderitz, 1234; Keetmanshoop, 1159; Swakopmund, 1125; Walvis Bay, 662.

Production and Trade. Stock raising was the principal industry. Livestock census (1933): 1,560,477 sheep, 649,816 goats, 628,462 cattle, 64,958 donkeys, and 3285 horses and mules. Diamonds, copper, lead, vanadium, and tin were the chief minerals exported. In 1934, imports were valued at £1,267,865; exports, £1,142,120 of which diamonds (257,813 carats) represented £449,167.

Government. Budget estimates (1934-35): revenue, £448,500; expenditure (including loan expenditure of £150,000), £850,548. The government was under an administrator aided by an executive council, an advisory council, and a legislative council of 18 members (12 elected and 6 appointed by the administrator). Administrator, D. G. Conradie.

History. The Union government at Pretoria appointed a commission during 1935 to examine the question of the resolution presented by the South-West African Assembly, which called for the administration of South-West Africa as a fifth province of the Union of South Africa. The attorney-general of South-West Africa appeared before the commission on Sept. 3, 1935, and pro-

duced a dossier, consisting largely of correspondence between the Nazi group in South-West Africa and authorities in Germany, which indicated that the Nazis were working for a change of mandate and had tried to introduce Nazi methods into the territory. The commission was still in session late in the year. See SOUTH AFRICA, UNION OF, under *History*.

SOVIET CENTRAL ASIA. A region in central Asia, including the territory formerly known as Russian Turkestan. Administratively it comprises the divisions, affiliated with the U.S.S.R. (q.v.), shown in the accompanying table.

<i>Division</i>	<i>Sq. m.</i>	<i>Pop. (1933)</i>	<i>Capital</i>
Tajik S.S.R.	56,608	1,183,100	Stalinabad
Turkmen S.S.R.	189,603	1,268,900	Ashkhabad
Uzbek S.S.R.	74,786	4,918,400	Tashkent
Kara-Kalpak A.S.S.R. .	46,154	338,100	Nukus
Kirghiz A.S.S.R.	75,942	1,108,200	Frunze

Chief towns: Tashkent, 491,000 inhabitants in 1933; Samarkand, 154,600; Andizhan, 85,712; Namangan, 80,784; Ashkhabad, 79,000; Kokand, 75,698; Frunze, 71,680; Stalinabad, 60,000.

SOVIET UNION. See UNION OF SOVIET SOCIALIST REPUBLICS.

SPAIN. A republic of southwestern Europe. Capital, Madrid.

Area and Population. Spain has an area of 194,237 square miles and a population estimated on Jan. 1, 1934, at 24,242,000 (23,563,867 at the 1930 census). Living births in 1934 numbered 637,446; deaths, 388,221; marriages (1933), 148,094; emigrants (1933), 69,330. There were 83,791 foreigners residing in Spain in 1930 (1012 Americans). The chief cities, with their estimated populations on Jan. 1, 1934, were: Barcelona, 1,060,504; Madrid, 1,014,704; Valencia, 341,322; Seville (Sevilla), 235,761; Málaga, 199,021; Zaragoza, 183,960; Bilbao, 171,204; Murcia, 164,044; Granada, 122,679; Córdoba, 112,177.

Education. The 1930 census showed that 57 per cent of the population over 10 years of age were unable to read or write. Enrollment in the primary schools in 1932 was 2,225,533; secondary (1931-32), 105,649, university (1931-32), 33,633. There are 11 universities (at Barcelona, Granada, Madrid, Murcia, Oviedo, Salamanca, Santiago, Seville, Valencia, Valladolid, and Zaragoza).

Production. Agriculture is the main occupation. In 1933, 39,973,000 acres, or 32 per cent of the total area, was suitable for cultivation, 57,812,000 acres were under pasture and forests, and 10,621,000 acres were devoted to fruit trees and orchards. Field crops in 1933 were valued at 8,535,000,000 pesetas. Production of the chief crops in 1934 was (in thousands of units): Wheat, 173,600 bu.; rye, 22,176 bu.; barley, 129,161 bu.; oats, 51,969 bu.; potatoes, 167,790 bu.; beet sugar (1934-35), 320 metric tons; olive oil, 66,109 gal.; wine, 539,958 gal. The 1935 wheat crop was estimated at 3,634,000 metric tons; rice (cleaned), 210,000 metric tons. Livestock in 1933 included 3,568,000 cattle, 4,773,000 swine, 19,093,000 sheep, 4,575,000 goats, and 2,758,000 horses, mules, and asses.

Mining and metallurgical production in 1934 was (in 1000 metric tons): Coal, 5337; lignite, 280; iron ore, 1970; pig iron, 344, steel ingots and castings, 509; lead, 73; zinc, 8.2. Coke output for 1933 was 675,000 metric tons, superphosphates, 967,000 tons; copper, 44,000 tons; mercury, 700 tons; manganese ore, 2800 tons; sulphur, 10,000 tons. The value of crude mineral product in 1933 was 469,439,000 pesetas; refined products, 940,705,000 pe-

setas. Cotton and wool textiles, paper, glass, and cement are leading manufactures. The sea fisheries in 1933 yielded 322,400 metric tons of fish, valued at 259,200,000 pesetas. Sardines, tunny, and cod are chief fishes caught.

Foreign Trade. According to preliminary returns, general imports in 1934 were valued at 860,600,000 pesetas (835,508,000 in 1933) and exports at 610,934,000 pesetas (671,174,000 in 1933). Leading 1934 imports were (in 1000 U.S. gold dollars): Chemicals and related products, 20,747; raw and waste cotton, 17,824; machinery, 15,929; automobiles, 10,786; mineral oils, 7901; fresh eggs, 6887. The chief exports were (in 1000 gold dollars): Fresh fruits, 30,118 (oranges, 25,286); olive oil, 8838; chemicals and related products, 8825; wines, 8638; canned and preserved fish, 4409; fresh vegetables, 4373. Of the 1934 imports, the United States supplied 17 per cent; Germany, 11.7; United Kingdom, 10.2; and France, 7.8 per cent. Of the exports, the United Kingdom took 23.2 per cent; France, 15.7; Germany, 11.2; United States, 8.5 per cent.

Imports in 1935 totaled 879,300,000 gold pesetas; exports, 588,200,000 pesetas. United States imports from Spain were \$19,901,073 (\$18,902,806 in 1934); exports to Spain, \$41,340,515 (\$38,029,417 in 1934).

Finance. Actual treasury returns for the calendar year 1934 showed receipts of 4,450,000,000 pesetas (including loans of 566,000,000) and expenditures of 4,477,000,000 pesetas. For 1933 receipts totaled 4,562,000,000 pesetas (loans, 589,000,000) and expenditures 4,426,000,000 pesetas. The total funded debt of the central government on Mar. 31, 1935, was 21,608,317,000 pesetas (21,166,443,400 on Jan. 1, 1934). The peseta (par value \$0.3267 in 1935), exchanged at an average of \$0.0804 in 1932, \$0.1072 in 1933, and \$0.1362 in 1934. In 1935 actual revenues totaled 4,139,000,000 pesetas; cash disbursements, 4,555,500,000 pesetas.

Communications. The Spanish railways, with 10,524 miles of line, carried 111,130,000 passengers and 39,655,000 metric tons of freight (including weight of freight cars) during 1933. Gross receipts for the year were 829,416,000 pesetas. The government appointed a commission to study the problem of railroad transportation in 1935. Highways in 1932 extended 57,627 miles. New airlines between Madrid and Paris, Barcelona and Marseille, Las Palmas and Tenerife, Barcelona and Palma de Mallorca were opened in 1935. The Spanish merchant marine had a gross tonnage of 1,777,700 on June 30, 1935. The net register tonnage of vessels entering the ports in overseas trade with cargo and in ballast in 1934 was 31,612,000 (31,892,000 in 1933).

Government. The Constitution of Dec. 9, 1931, declared a democratic republic of workers of all classes, organized as an integral state but with autonomy for municipalities and certain regions such as Catalonia (q.v.). Legislative power was vested in the people, who exercised it through the unicameral Cortes, or Congress of (455) Deputies, elected for four years. The President was elected for six years conjointly by the Cortes and by an equal number of electors chosen by universal, secret suffrage. He was ineligible for reelection for six years after the end of his term. The President appointed the Premier and also the members of the Premier's cabinet on nomination of the latter. President in 1935, Niceto Alcalá Zamora y Torres, elected Dec. 10, 1931. Premier at the beginning of 1935, Alejandro Lerroux García (Radical).

HISTORY

Strengthened by radical excesses during the abortive revolt of October, 1934, the swing toward conservatism in Spain continued throughout the greater part of 1935. The coalition of Right and Centre groups headed by Premier Alejandro Lerroux, although hindered by internal dissensions and frequent cabinet reorganizations, made substantial progress in their efforts to nullify the radical economic and anti-clerical reforms enacted previous to the conservative victory in the elections of November–December, 1933. During the latter half of the year, however, the Right–Centre coalition was seriously weakened by the opposition of President Alcalá Zamora and by Lerroux's forced withdrawal from the government due to political scandals involving several of his Ministers. Meanwhile the radical parties were reorganizing their forces shattered in the 1934 rebellion. Despite the almost continuous suspension of constitutional guarantees and repressive measures by the government, the opposition groups formed a united front late in the year and prepared to make a new bid for power.

The Lerroux Ministries. The revolt of October, 1934, had been precipitated by the formation of a Ministry under Señor Lerroux which contained three members of the conservative Catholic *Acción Popular* party led by José María Gil Robles (see 1934 YEAR BOOK, p. 662). Lerroux and his moderate republican allies of the Centre were dependent upon the support of the *Acción Popular* for their continuance in office. But Gil Robles' constant pressure for more conservative measures than the Centre was prepared to accept made the course of the cabinet anything but smooth and led to frequent reorganizations. On the other hand, Gil Robles was anxious not to take over full control of the government until the abolition of the anti-clerical provisions of the Constitution had been obtained with Centre support. Although *Acción Popular* had the largest single representation in the Cortes, Gil Robles and his allies on the Right lacked sufficient votes to carry through constitutional amendments without the support of the Centre. (Under the Constitution, amendment of that document required a two-thirds vote of the Cortes during the first four years it was in force. After the expiration of the fourth year, on Dec. 9, 1935, it could be amended by a majority vote.)

The first reorganization of the Lerroux Cabinet occurred immediately prior to the reassembling of the Cortes on Jan. 29, 1935. *Acción Popular* forced the dismissal of the Minister of Education, Filiberto Villalobos, a Free Mason opposed to clericalism in education, but Lerroux filled this and other vacant posts with members of his own Radical party, leaving *Acción Popular* with the same representation as before. Soon afterward, by again threatening to withdraw his support, Gil Robles forced President Alcalá Zamora to approve plans for the reform of the Tribunal of Constitutional Guarantees, a move aimed at the elimination of many Socialist judges. He also forced Lerroux to appoint members of *Acción Popular* as governors of 16 out of the 49 Provinces.

The Lerroux Cabinet again resigned on March 28, as a result of the strong opposition of the *Acción Popular* members to the ministry's leniency in pardoning 20 Leftists implicated in the 1934 revolt. Gil Robles was still unwilling to take over the government, however, and on April 3 Lerroux formed a new cabinet from which the Catholic party was excluded. Advised that *Acción Popular*

would retaliate by overthrowing the government, President Zamora suspended the Cortes for a month. During this period of grace, Premier Lerroux attempted to conciliate the Left groups, who were displaying increasing bitterness at the harsh measures adopted toward the 1934 revolutionists and at the continued repression of their organizations. On April the "state of war" in the Provinces of Madrid, Catalonia, and Asturias was annulled and a modified form of civil law was restored throughout most of the country. Part of the autonomous powers taken from Catalonia after the 1934 revolt were restored and an amnesty was granted political refugees abroad. However the important municipal elections, scheduled for April, were postponed.

Immediately prior to the reassembling of the Cortes in May Premier Lerroux was obliged on May 6 to again reorganize his Cabinet and admit members of the *Acción Popular* in order to avoid defeat. He gave the Catholics five of the seven portfolios demanded by Gil Robles, who entered the ministry for the first time as Minister of War. The new cabinet lineup represented a distinct swing to the Right. The conservative members of the government brought increasing pressure to bear for amendment of the Constitution and for legislation in the interests of the Catholic Church. At the same time the municipal elections were again postponed to the autumn. On June 5 the harsh sentences imposed by the Tribunal of Constitutional Guarantees on the ringleaders of the Catalan independence movement of 1934 reflected the more severe attitude of the new Lerroux Ministry. Luis Companys, former President of the Catalan Generalitat, and six former members of the Catalan executive committee were sentenced to serve 30 years each in prison. On the other hand, the government permitted the reopening of Socialist headquarters in Madrid and several other cities which had been closed since the October revolt.

Before the Cortes adjourned for the summer vacation, the government secured the enactment on August 1 of drastic amendments to the Agrarian Reform Law. Instead of confiscation of the large landed estates for redistribution among the peasantry, the new law guaranteed compensation to the owners on exceedingly favorable terms. Estates of the grandes were to be purchased from government appropriations for resale to the peasants, but the initial appropriation of only 50,000 pesetas for land purchase indicated that the government was in no hurry to carry out its modified programme. The emasculation of their original land reform bill so aroused the Leftist deputies that on July 25 many of them withdrew from the Cortes in protest. The Left was even more angered by the draft proposals for amendment of the Constitution submitted to the Cortes before it adjourned. Revision of 42 out of the 125 articles in the Constitution was recommended, the changes providing particularly for the return of the Jesuits, the reopening of church schools, and the reestablishment of Roman Catholicism as the state religion. The government also attempted, unsuccessfully, to convict former Premier Azaña of complicity in the sale of Portuguese arms to the Asturian Socialists for use in the October, 1934, revolt.

These conservative tendencies provoked widespread political unrest, which was accompanied by increasing violence, especially in Catalonia (q.v.). The government repressed the disorders with

severity. Martial law was reestablished on June 6 and repeatedly extended. On June 9 a complete ban on all political meetings was proclaimed. The censorship of the press was strengthened. Government "administrative commissions" ruled many municipalities in place of the duly elected republican and socialist councillors, who had been ousted for opposing the government. No concession was made to the autonomy demands of the Basque Provinces (q.v.). Troops were sent into Barcelona and other Catalan cities to supersede the police and check radical violence. The ban on political meetings was continued in Catalonia after it was lifted in the rest of Spain. In Barcelona the government restored to the owners extensive properties which had been confiscated under anti-Jesuit legislation, but which the Lerroux Government held to have been merely rented to the Jesuits by a private corporation.

The Chapaprieta Ministry. On September 20 the Lerroux Ministry was again forced to resign through the withdrawal of the Agrarians from the coalition. Departing from his previous policy, President Alcalá Zamora prevented another reorganization of the cabinet under Lerroux by asking Santiago Alba to head a new ministry. Señor Alba, who was a member of Lerroux's Radical party and President of the Cortes, was unable to secure the necessary support. The President then called upon Joaquín Chapaprieta, Finance Minister under Lerroux, who formed another Right-Centre coalition government on September 25. Gil Robles again held the War portfolio and Lerroux assumed charge of the Foreign Office in response to President Alcalá Zamora's demand for an experienced official in this important post (The Anglo-Italian crisis in the Mediterranean then appeared likely to plunge Europe into war.)

Although representing the same party lineup as the preceding Lerroux Ministry, the Chapaprieta Cabinet placed its major emphasis upon financial and budgetary reform. The budget deficit had grown to alarming proportions and the unfavorable trade balance, coupled with other economic factors, threatened to drive Spain off the gold standard. In line with this policy, the government ended most of the repressive measures adopted against the Left parties. Martial law was ended even in Catalonia, the press censorship was modified, and the Left groups were permitted to reopen political headquarters and resume their activities.

Shortly after the Chapaprieta Ministry was formed, there occurred a major political scandal which proved a severe blow to the Right-Centre coalition. Following the action of the government in closing his gambling resort at San Sebastián, Daniel Strauss, a Mexican citizen, charged that he had obtained the concession to operate the place by distributing 2,000,000 pesetas among persons closely affiliated with the government, including the Mayor of Madrid and a nephew and adopted son of Foreign Minister Lerroux. The charges were substantiated in part by a parliamentary commission of inquiry on October 26 and three days later Lerroux and José Rocha, Radical Minister of Education, withdrew from the cabinet to facilitate the investigation. José Martínez de Velasco, Agrarian party leader, succeeded Lerroux at the Foreign Office.

Premier Chapaprieta succeeded in enacting some economy measures, but his effort to balance the budget failed when *Acción Popular* refused to support a programme of heavy taxes on the rich. Withdrawal of the Catholic party's support forced

the resignation of the ministry on December 9.

Portela Valladares Cabinet. Although a devout Catholic and favorably disposed toward the restoration of the Church's privileged position, President Alcala Zamora distrusted the loyalty to the Republic of Gil Robles and his conservative allies. As head of the largest party in the Cortes, Gil Robles was the logical choice for the Premiership, but the President passed him by in favor of Manuel Portela Valladares, an independent and former Minister of Interior. On December 14 the latter formed a largely non-partisan ministry which lacked a majority in the Cortes. The Premier prevented the immediate overthrow of his cabinet only by suspending the sessions of the Cortes until Jan. 31, 1936.

This action, taken with the approval of the President, aroused a storm of criticism, particularly from the extreme Right. Petitions for the impeachment of both the Premier and the President were circulated, but without securing the necessary signatures. Premier Portela on taking over the government had announced that his main purpose was to hold "scrupulously impartial" elections, not later than Mar. 4, 1936. Late in December, however, he announced that he intended to form a government Centre party, which would actively enter the electoral campaign. This move led to the withdrawal of six conservative members of his cabinet and he was obliged to resign on December 30.

Señor Portela was immediately charged by President Alcala Zamora to form another minority government, and he did so the same day. These developments made it certain that a general election would be held early in 1936. For months the rival parties had been girding themselves for a supreme test, which many believed would determine the fate of the Republic. Convinced that another victory of the Right forces under Gil Robles would lead directly to the restoration of the monarchy, the Left Republican parties led by former Premier Azaña had formed a united front with the Socialists under Francisco Largo Caballero and with the powerful Syndicalist and Anarchist organizations. The Socialist-Left Republican coalition had brought about the overthrow of the monarchy in 1931. The Syndicalists and Anarchists, in joining the Left coalition, departed for the first time from their doctrinaire opposition to the use of the ballot and participation in a "bourgeois-capitalist election." The union of these powerful groups obviously presented a strong threat to the Right. To meet this threat a coalition of the conservative Republican and monarchist parties was organized under the leadership of Gil Robles. The stage was set for a showdown between the forces of the Left and the Right early in 1936.

Economic Affairs. The economic situation showed a moderate improvement during the greater part of 1935, but the political developments toward the end of the year aroused new fears of impending disorders and checked the expansion of business activities. The suspension of the Cortes in December made necessary the extension of the 1935 budget by cabinet decree into 1936. Plans for balancing the budget, converting the public debt, and further reorganizing government finances also were abandoned temporarily. Nevertheless, considerable progress was made along these lines during the latter part of the year. Economies under the Lerroux Ministries had saved about 800,000,000 pesetas and more economy measures were taken under Premier Chapaprieta. In September

the government carried through a successful refunding operation, exchanging 305,000,000 pesetas of 6 per cent bonds into new bonds bearing 4 per cent interest. A refunding of outstanding 5 per cent bonds to the 4 per cent rate was then carried through.

These gains were offset in part by the continued decline of the export trade without a compensating reduction of imports, stagnation in the coal mining and cotton textile industries, and the continued financial difficulties of the railways. The adverse trade balance and the decline of the tourist trade made it increasingly difficult to pay for imports. Remittances to the United States, with which Spain had a particularly heavy trade deficit, were delayed more than six months and the importation of United States products was notably hampered by the rulings of the exchange control board. A trade war with France and exchange difficulties with England also hindered Spanish trade.

Foreign Relations. Two chief problems confronted Spain in the sphere of foreign affairs during 1935. The first involved the search for new markets for Spanish exports to relieve unemployment and financial stringency. The second involved the policy to be followed by Spain in the event of another European war.

Negotiations for trade agreements which would open additional markets to Spanish products continued actively throughout the year. Treaties of this nature were concluded with the Netherlands, Poland, and Argentina. Early in the year negotiations were started with France, Britain, and the United States, but slow progress was made. In April the negotiations with France were interrupted by a commercial war, which continued until the conclusion of a new Franco-Spanish commercial treaty on December 21. Negotiations with Britain were broken off early in August due to the application of the British tariff to Spanish products, but were resumed later in the year.

The fact that Italy had become a better customer for Spanish exports than either France or Great Britain placed Spain in a difficult position when the League of Nations in October voted to apply economic sanctions against Italy for her aggression upon Ethiopia (q.v.). The conservative and Fascist elements in Spain were inclined to favor Italy, while the Left groups were bitter in their attacks upon Mussolini's imperialistic adventure in Africa. On September 27 the cabinet decided upon a policy of "absolute neutrality in accordance with our republican Constitution, which renounces war as an instrument of national policy." However the Spanish representative at Geneva gave full support to the principle of collective security under which economic sanctions were applied against Italy. On October 16 Foreign Minister Armando R. Monteiro of Portugal conferred with Foreign Minister Lerroux at Madrid and reached an agreement for joint action in support of the League sanctions.

It was officially denied on November 6 that Spain had reached an understanding with Portugal and Great Britain. In October the British made an official inquiry at Madrid as to the attitude Spain would adopt in case of a naval warfare between Britain and Italy. Apparently no positive commitment had been made by Spain up to the end of 1935, but it was indicated that the question of whether Spanish ports would remain open to British warships would depend entirely upon the decisions of the League of Nations. Meanwhile Spain was proceeding to strengthen her military,

naval, and air forces and was rushing work on the fortification of the strategically important Balearic Islands.

See GREAT BRITAIN, ITALY, and PORTUGAL under *History*.

SPANISH-AMERICAN LITERATURES.

The following résumé of the year's activities must not be taken as exhausting the subject, nor must the omission of any country be held as evidence that it has been non-productive in 1935.

Argentina. Again erudition seems to have outstripped the other genres, although verse and fiction show improvement.

Erudition. Manuel Gálvez, *La Argentina en nuestros libros*; Bernardo González Arrioli, *Mariano Moreno*; Alvaro Melián Lafinur, *La disputa de los siglos*; Rómulo Múñiz, *El Gaucho*; Manuel E. Valentini, *Erasmus y Vives* (brilliant study of Humanism); Ricardo Rojas, *Cervantes* (beautiful analysis of Cervantes as a poet [lyric, dramatic, and epic], matured through many years and written in exile in Ushuaia, the southernmost city in the world); Stuart Cuthbertson, *The Poetry of José Mármol* (careful examination of all the poetic work of an author whose fame hitherto has rested mainly on his novel *Amalia* and his poems of political invective); Ernesto Nelson, *Bibliografía General de las obras referentes a Estados Unidos*.

Drama. Pedro Echagüe, *Amor y Virtud* (verse-drama in three acts, published by the Instituto de Literatura Argentina); Llanderas y Malfatti, *Así es la vida* (Argentine comedy, first played in Madrid, great success).

Poetry. Rafael Alberto Arrieta, *La Ciudad del Bosque* (series of "viñetas platenses," spiritual history of the city of La Plata); Antonio de la Torre, *Globo* (excellent, continues the nature and countryside motives that inspired his earlier works); César Tiempo (Argentine Jewish poet, born in the Ukraine), *Sabatón argentino* (work shows originality of form and content); María Adela Domínguez, *Diez poemas* (small volume of much promise); Amado Villar, *Marimorena* (second book of exquisite verse by author of *Versos con sol y pájaros*).

Fiction. Samuel Glusberg (influential publisher and essayist, writing under the pen-name of Enrique Espinoza), *Ruth y Noemi* (charming book of tales); Carlos María Ocantos, *La princesa está alegre*; Guillermo Perovich, *Angadas en la corrienté* (carefully drawn characters, well told narrations, and good descriptions); Hugo Wast (Gustavo Martínez Zuviría, National Librarian), *Oro* (frankly anti-Semitic novel, concerning the banking supremacy of the Jews throughout the world), and, as a separate pamphlet, the prologue of the foregoing, entitled *Buenos Aires, futura Babilonia*.

Academy. The Academia Argentina de Letras (not the Academia Argentina, Correspondiente de la Española) elected Carlos Ibárguren as its president, to succeed Calixto Oyuela. Other writers elected to membership are: Martín Gil, Bernardo Houssay, Matías G. Sánchez Sorondo, and Francisco Soto y Calvo.

Necrology. Calixto Oyuela, the dean of Argentine writers, whose work over a period of 50 years has been successively admired, disputed, and repudiated by his contemporaries, was the last survivor of a generation of classic-romanticists such as Olegario V. Andrade, Carlos Guido y Spano, and Rafael Obligado, and a staunch defender of pure Castilian style.—Martiniano Leguizamón, writer, historian, and jurist, the first to defend and interpret accurately and artistically "criollismo."

Prizes. The Premios Municipales de Literatura, of the city of Buenos Aires, were awarded as follows: *Poetry*: First Prize, *Marimorena*, Amado Villar; Second Prize, *La Flor en el agua*, María Julia Jijena; Third Prize, *Retablo*, Mary Rega Molina. *Prose*: First Prize, *Cántico y forma*, Enrique Corbellini; Second Prize, *Adán en la Cor-dillera*, José Martínez Jerez; Third Prize, *Vigilia*, J. Anderson Imbert.

Bolivia. In the Academia Boliviana (Correspondiente de la Española), the following were elected: Claudio Pinilla, Fabián Vaca Chávez, and Eduardo Díez de Medina.—Despite the distractions caused by the Chaco war, some interesting works have appeared. Fernando Díez de Medina, *Imagen* (beautiful verse), and *El velero matinal* (interesting essays); Raúl Otero Reiche, *Poemas de sangre y lejanía* (so impressive that the author has been called the "bard of the Chaco epic"); Augusto Guzmán Martínez, *La sima fecunda* (considered by critics the outstanding example of genuine *criollismo*); Fernando Loayza Beltrán, *De Peñas, a 4,000 metros oteando el Altiplano* (charming example of Bolivian folklore).

Chile. The Chilean works that have reached us are primarily verse and erudition.

Erudition. Julio Vicuña Cifuentes (distinguished folklorist, author of several important works, e.g. *He dicho*, and *Estudios de métrica española*), *Alejandro Agunet* (sympathetic account of the life of a great teacher); E. Solar Correa, *La muerte del humanismo en Chile* (a blow at educators who are opposed to cultural studies); Joaquín Navasal y de Mendi, *La Hora de España* (critical study of the history of Spain from the assassination of General Prim through the first two years of the present Republic); Augusto Orrego Luco, *La Patria Vieja* (2 vols. in 4°, published by the University of Chile, as a posthumous tribute to the cultural work of the author, who had completed the manuscript in form to go to press; important not only for knowledge of Hispano-America, but also for understanding of the genesis of the idea of Independence in the former dominions of Spain); Domingo Amunátegui Solar, *Jesuitas, Gobernantes, Militares, y Escritores* (very important work for understanding Chilean history, highly praised by critics), *Las letras chilenas. Hijos ilustres de Chillán* (interesting history of personalities and events, edition of the University of Chile, dedicated to the first centenary of the fourth founding of the City of Chillán, 1835-1935); Julio Saavedra Molina, *Los hexámetros castellanos y en particular los de Rubén Darío* (detailed study of Darío's efforts at writing hexameters on the model of the Latin).

Poetry. Raúl Silva Castro, *Obras desconocidas de Rubén Darío* (presenting much new material of great importance); Eduardo Anguita and Volodia Teitelboim, *Antología de poesía chilena nueva*, Carlos Préndez Saldías, *Alamos nuevos* (critics say this is his best work); Pablo Neruda, *Tres poemas materiales*.

The *Boletín de la Academia Chilena* continues to publish its lexicographical studies concerning "Americanisms."

Colombia. The Director of the Biblioteca Nacional, upon learning of these annual articles in the NEW INTERNATIONAL YEAR BOOK, sent in 20 volumes of recent works. Two of these (the 3d ed. of Tomo I of *Elocuencia colombiana*, edited by Roberto Ramírez B. in 1928—a fine chronological selection of important orations; and *Jenny*, a Colombian novel by Luis Alberto Castellanos, 1932)

would not ordinarily appear in our account limited to the last months of 1934 and the first 10 months of 1935. One of the gifts is a magnificent, profusely illustrated homage presented to President Enrique Olaya Herrera at the close of his fruitful presidential term, 1930-34, entitled *Administración Olaya Herrera*.

Erudition. Rafael Maya, *Alabanzas del hombre y de la tierra*; José Alfredo Guzmán, *Visiones indo-americanas* (author having traveled much through Indo-America, these 28 essays are descriptions of scenes as he envisions them from the view point of the aborigines); Miguel Antonio Caro (Edición oficial, dirigida por Víctor E. Caro), *Obras Completas*, vols. v and vi; and *Obras poéticas*, vols. i, ii, and iii (these volumes of the great humanist are published by the government); Academia Nacional de Bellas Artes, *Iniciación de una Guía de Arte Colombiano* (302 quarto pages, 83 full-page plates *hors texte*); José J. Ortega T., *Historia de la literatura colombiana* (compendious history of Colombian literature 1538-1810); Gustavo Arboleda, *Manuel de Historia de Colombia* (from the discovery down to late in 1934); *Cariores prosistas amenos* (Biblioteca aldeana de Colombia); Eduardo López, *Temas nacionales*, Enciclopedia Comercial e Histórica de Colombia, Tomo IV, Primera entrega, A-LL (useful reference book); Leonardo Tascón, *Quechuisms usados en Colombia* (posthumous publication of an important philological study of the Quechua language); Luis Alberto Acuña, *El arte de los indios colombianos—Ensayo crítico e histórico*; Miguel Aguilera, *Los Caballos del Libertador* and *El Sobrino Calavera* (two delightful "trivial" notes about Bolívar).

Poetry. Pedro Vélez Racero, *Poesías* (prologue by J. and F. de la Vega—delightful study of the brilliant Colombian statesman and poet, posthumous edition of his works); Arturo Camacho Ramírez, *Espejo de naufragios*; Ismael Enrique Arciniegas, *Los Trojes de José María de Heredia* (careful translation into Spanish sonnet form of the entire 118 sonnets of Heredia); Germán Pardo García, *Los cánticos* (de luxe edition in large quarto of 21 beautiful sonnets and 5 poems of varied form).

Fiction. Eduardo Zalamea Borda, *4 años a bordo de mí mismo—diario de los 5 sentidos*; J. A. Osorio Lizarazo, *La cosecha* and *El criminal* (the latter a study of the growth of a criminal idea in a man's mind).

The *Academia Colombiana*, Correspondiente de la Española, held a special session in honor of the tercentenary of Lope de Vega, Antonio Gómez Restrepo being the principal speaker. Vice the late Carlos Martínez Silva, the Academy received José Vicente Castro Silva, canon of the Iglesia Metropolitana de Bogotá and regent of the Colegio del Rosario; and vice José Vicente Concha, it received Luis López de Mesa, Minister of National Education, physician, novelist, sociologist, and historian.

Costa Rica. Rogelio Sotela Bonilla, *Rimas Serenas*; Roberto Brenes Mesén, *En busca del Grial—Poemas*.

Cuba. The following materials have come to hand. Juan J. Remos y Rubio, *Tendencias de la Narración Imaginativa en Cuba* (valuable contribution to our knowledge of fiction in Cuban literature); José Antonio Ramos, *Panorama de la Literatura Norteamericana, 1600-1935* (sympathetic study of our American literature, by a forerunner; should be read by many of us); *Homenaje a Enrique José Varona en el cincuentenario de su*

primer curso de filosofía, 1880-1930 (this volume of numerous studies is a magnificent tribute to Varona); Fernando Ortiz, *De la música afro-cubana—un estímulo para su estudio*, and *La "clave" xilofónica de la música cubana* (two interesting continuations of his ethnographic studies); José María Chacón y Calvo, *Aviraneta, pacificador* (documented study of a little-known phase of Aviraneta's life), *El Padre Varela y la Autonomía Colonial* (new documentary evidence concerning Varela), and *Apuntes de la guerra de Cuba del General Salamanca* (inedited MS., now critically edited with notes and a preliminary study); Ramiro Guerra y Sánchez, *La expansión territorial de los Estados Unidos, a expensas de España y de los países hispanoamericanos* (the title indicates the nature of the work, and Americans should read it). The *Universidad de la Habana*, a bi-monthly magazine, is a very important addition to our working materials. It carries valuable articles, such as *Craticismo y colonización* by J. M. Chacón y Calvo; *Primeras relaciones entre Cuba y los Estados Unidos*, by Herminio Portell Vilá (which we Americans ought to read carefully). Another valuable aid to our knowledge of Cuba is *La Revista bimestre cubana*, directed by Fernando Ortiz. In recent numbers one finds two articles by Fernando Ortiz, *Cómo eran los indocubanos* and *La holgazanería de los indios*; a *Bibliografía de la Avellaneda*, by Edith L. Kelly; also five articles concerning José Agustín Caballero y Rodríguez.

Cuba lost through death her academician and diplomat, Manuel Márquez Sterling, Ambassador of Cuba to the United States.

The *Academia Cubana* (Correspondiente de la Española) elected to fill vacancies José Ignacio Rivero, Medardo Vitier, Agustín Acosta, Juan J. Remos, Félix Lizaso, and Enrique Gaspar Rodríguez.

Dominican Republic. The Academia Dominicana de la Historia received Emilio Rodríguez Demorizi—Max Henríquez Ureña, *Panorama de la República Dominicana* (several illustrations, brief sketches of the geography, history, and intellectual life of the Dominican Republic, as well as the official words and music of the National Hymn); Manuel Cabral (youngest and most celebrated of Dominican poets), *12 Poemas Negros*.

On February 6, the Academy and the country suffered a great loss through the death, in Santiago de Cuba, of Dr. Francisco Henríquez y Carvajal, man of letters, orator, teacher, statesman, physician (graduated from the Faculties of Paris, Habana, and Santo Domingo), diplomat, Secretary of State 1899-1902, and President of the Dominican Republic in 1916. He was born in Santo Domingo, Jan. 14, 1859, was the brother of Federico Henríquez y Carvajal (ex-Rector of the University and Director of the Academia de la Historia), and father of Max Henríquez Ureña and Pedro Henríquez Ureña.

Ecuador. Classical scholarship is still in vogue in Ecuador, as witness bi-millennial activities concerning Vergil and Horace: *La Medalla "Honorable Vázquez"* y el libro "*Virgilio, el Poeta, y su Misión Providencial*"; Aurelio Espinosa Polít, S.J., *El bimilenario de Horacio*, and *Sófocles—Edipo Rey* (in Castilian verse).

Alejandro Andrade Coello, *Eloy Alfaro, El ocazo de los conquistadores, Los Genios, Del Quito Antiguo, y A través de los libros*; Roberto Agramonte, *El panorama cultural de Montalvo*.

Guatemala. *Publicaciones de la Academia Guatemalteca*, iii and iv, contain some important

studies.—Guillermo F. Hall, *El Desarrollo de la Literatura Inglesa y Traducciones del Inglés*; A. J. Irisarri, *Cuestiones filológicas*; Salvador Falla, *Las palabras* (semantic study) and *Sobre moral*; David Vela, *El Mito de Colón*; the continuation of the reprinting of the long out-of-print *Cuestiones Filológicas* of Antonio José Irisarri; and the reproduction of the pamphlet, printed in Spain, entitled *Don Pedro de Liévana*, by A. R. Rodríguez Moñino (Liévana being the first poet to write Spanish verse in Guatemala).—Pedro Pérez Valenzuela, in *La Nueva Guatemala*, gives a documented history of the city of Nueva Guatemala.—The Government of Guatemala has decreed the publication, at the expense of the State, of all the works of Santiago Arguello, member of the Academia Guatemalteca. The following volumes have already appeared within the last year: *El Divino Platón* (2 vols., already out of print); *El Libro de los Apólogos y otras cosas Espirituales*; *La Magia de Leonardo de Vinci*; *Mi mensaje a la Juventud y otras Orientaciones* (2d edition); *Modernismo y Modernistas* (2 vols.); and *Poesías Escogidas y Poesías Nuevas*.

The *Academia Guatemalteca* (Correspondiente de la Española) lost its nonagenarian Director, Salvador Falla, ex-Rector of the University and ex-President of the Sociedad de Geografía e Historia.

Mexico. Poets and scholars have been more active than writers of other types.

Poetry. José Muñoz Cota, *Romances de la hoz y del martillo*, and *Canciones de la Vida Futura* (poems of diaphanous simplicity, preaching international proletarian fraternity); Enrique Carniado, *Alma Párvula*; Antonio Castro Leal, *Las Cien Mejores Poesías (Líricas) Mexicanas* (new and improved edition—fine panorama of Mexican lyric verse); Ramón López Velarde, *Poemas escogidos—con un estudio de Xavier Villaurrutia*; Adela Palacios, *Cuadros Escolares*, (poems with a fine flavor).

Drama. Francisco Navarro published *El mundo sin deseo*, a volume of six plays, the most unusual one of which gave its title to the volume.

Fiction. Mauricio Magdaleno produced *Campo Celis*, a novel of country life in Zacatecas, Jalisco, and Aguascalientes, showing types masterfully sketched.

Erudition. Erudition outran the other branches and we list: Luis Rosado Vega, *El alma misteriosa del Mayab* (preserves the folklore of aboriginal Yucatan); Salvador Novo, *Continente vacío: viaje a Sudamérica* (charming book of travel, quite different from the average run); Xavier Icaza, *La Revolución Mexicana y la Literatura*; Archivo general de la nación, *Documentos Inéditos relativos a Hernán Cortés y su Familia* (very important sources); Doctor Atl, *Un Hombre más allá del Universo* (original philosophical conceptions in novelistic garb); Antonio Cortés, *Hierros Forjados* (very important, highly illustrated study of wrought iron art, in the Colección del Museo Nacional de Arqueología, Historia y Etnografía); Secretaría de Educación Pública, *Guía Bibliográfica de la Historia de México, 1: Época precortesiana*; Genaro Estrada, *Algunos Papeles para la Historia de las Bellas Artes en México* (very important and suggestive); Alfonso Reyes, *Minuta* (poetic game for the gourmet); Francisco L. Urquiza, *Recuerdo que . . .* (souvenirs of one who served widely), and *Carranza* (fine, short biography written by a friend); Bernardo Ortiz de Montellano, *La Poesía Indígena de México* (penetrates the

sensibility of the unknown bards of the aboriginal tribes); Dr. Emilio Valton, *Impresos Mexicanos del Siglo XVI—Incunables americanos* (treats the origins of printing in America); José María Vigil, *Lope de Vega—Impresiones Literarias* (official contribution of the Mexican Government to the tercentenary of Lope); José de J. Núñez y Domínguez, *Al margen de la historia*, (delightful sidelights on many personages and events); Ezequiel A. Chávez, *El Primero de los Grandes Educadores de la América: Fray Pedro de Gant. The Academia Mejicana*. (Correspondiente de la Española) seated member-elect Carlos Díaz Dufoo.

Peru. Peru celebrated with due ceremony the 400th anniversary of the founding of Lima by Pizarro, January 18, and, January 25, laid the corner stone of a monument to Ricardo Palma. On August 27 was held a great ceremony for the tercentenary of the death of Lope de Vega.

The following publications have come to hand Ventura García Calderón, *Un Congreso de la Lengua Castellana*; José de la Riva-Aguero, *El Primer Alcalde de Lima, Nicolás de Ribera el Viejo, y su Posteridad* (illustrated with facsimiles and photographs), and *Discursos Académicos*; Alberto Guillén, *La leyenda Patria* (lyric evocation of Peruvian history for children); Clemente Palma, *Don Alonso Henríquez de Guzmán y el primer poema sobre la conquista de América*, and X. Y. Z. (a wildly fanciful novel with scene laid in the United States).

The *Academia Peruana* (Correspondiente de la Española) seated member-elect Enrique A. Carrillo, and elected Manuel Vicente Villarín to the chair left vacant upon the death of Emilio Gutiérrez de Quintanilla, the last survivor of the group which established the Peruvian Academy about 50 years ago, novelist, critic, historian, whose contemporaries called him the "Menéndez y Pelayo del Perú."

Peru's greatest loss, however, came through the death of Angélica Palma, gifted daughter of Ricardo Palma. Born in Lima, Oct. 25, 1885, her formal studies were made in Lima in the school of Doña Teresa González de Fanning. The rest of her training was received at the hands of her father. She herself had said that the most interesting thing in her life was having been the secretary and constant companion of her father, when bad health had forced him to retire to Miraflores, in the outskirts of Lima.

In 1918, Angélica Palma published her first novels, *Vencida* and *Morbus aureus*, under the pseudonym of "Marianela." *Por senda propia* was published in Lima in 1921. In that same year, in an international literary competition held in Buenos Aires, her novel *Colonaje romántico* won the prize, and appeared in 1923. In 1924, in Lima, there was a literary competition to commemorate the centenary of the battle of Ayacucho. Her historical novel *Tiempos de la patria vieja* won first prize, and was published in 1926. In that same year she published *Uno de tantos*, and a pamphlet, *Ricardo Palma*, in the collection *Figuras de la raza*. For the centenary of her father's birth she published, in 1933, an illustrated volume entitled *Ricardo Palma*, and giving a detailed account of his life.

For a number of years she was in Madrid, while she supervised the printing of the definitive edition of her father's *Tradiciones Peruanas*, in six large volumes. In 1923 she attended the Congreso Teresiano, held in Madrid. In 1926 she was Peruv-

an delegate to the Inter-American Congress of Women, in Panama, and in 1929, one of Peru's delegates to the Exposition at Seville, and later in the Congress of History at Barcelona.

She was Corresponding Member of the Real Academia de Buenas Letras de Barcelona, and of the Real Academia Hispano-Americana de Cadiz. In 1924, Alfonso XIII made her a Knight Commander of the Civil Order of Alfonso XII.

Angélica Palma died in Rosario (Argentina) Sept. 6, 1935, on a lecture tour as the guest of the Argentine Republic, which insisted that the funeral be at the expense of the State.

Uruguay. The pantheistic author, Montiel Ballesteros, wrote *Pasión*, his latest novel.—Fernando Nébel produced *Dos amores*, new poems filled with a Vergilian feeling for nature.

Venezuela. Antonio Spinetti Dini wrote *La palabra al viento*, interesting verse.

SPANISH LITERATURE. Again, as in the past two years, erudition during 1935 has apparently outrun any of the creative forms of literature, with drama surging ahead of fiction for second place.

Drama. The older generation continues to prove that it can write dramas that the public will welcome: J. Benavente, *Memorias de un Madrileño*, *La novia de nieve*, "No juguéis con esas cosas," and *Cualquiera lo sabe*; S. y J. Álvarez Quintero, *Para mal, el mío*, *Martes*, 13, *La comiquilla*, and *La inglesa sevillana*; Eduardo Marquina, *La Dorotea* (inspired by Lope de Vega's work of the same name), *Lo que Dios no perdona*, and *En el nombre del Padre*; Carlos Arniches, *La tragedia del peléle*; Pedro Muñoz Seca, *El Rey negro*, *El gran ciudadano*, *Papeles*, *¡Cataplúm!*, and *¡Solal!*; Luis de Vargas, *Doña Mariquita*; Enrique Suárez de Deza, *Adiós, muchachos*, *La millona*, and *Mamá Inés*; Francisco Serrano Anguita, *Capercucita gris*; Federico García Lorca, *Bodas de sangre*, and *Yerma*; and José María Pemán, *Noche de levante en calma*, *Cisneros*, and *Cuando las Cortes de Cádiz*.—Others that should be mentioned are: José de Lucio, *Pepa la trueno*; Francisco Ramos de Castro and Anselmo Carreño, *Sevilyyí*.—The first prize (for new authors) in the competition of the Sociedad Artística Muñoz Seca was won by Fernando de Tena Dávila and González Galocha with their *Guñol de Hogar*.

Fiction. Pio Baroja offers two new books, completing his *Memorias de un hombre de acción*, viz. *Crónica escandalosa* and *Desde el principio hasta el fin*.—Ricardo Baroja wrote *La nao "Capitana"*, with illustrations by the author.—José Más wrote *El rebaño hambriento en la tierra feras*; Eduardo Zamacois, *La antorcha apagada*; and Francisco Agustín, *Justo, el crítico*.—Other novelists who should be mentioned are: Xavier Cabello Lapiedra, *La l'ercidita*; Tomás Borrás, *Casi verdad, casi mentira*; Benjamín Jarnés, *Libro de Esther*.

Poetry. While there is not a great quantity of verse, such as we have is good. José María Uncal, *Diez velas sobre el Mar*; José María Gutiérrez Ballesteros, *Sal y Sol de Andalucía*; José Carlos de Luna, *El Cristo de los gitanos*; Dr. José Goyanes, *Los Atlantes*; María Enriqueta, *Poemas del campo*; J. M. Pemán, *Señorita del Mar*; Adela de Medina, *La Buenaventura*.

Erudition. Again scholarship has flourished. Francisco Rodríguez Marín published his critical, annotated edition of Cervantes' *El Viaje al Parnaso* and the *Epistolario Menéndez y Pelayo*—*Rodríguez Marín*; Cannon by José Solano (in

the Collection of The Hispanic Society of America); Juan Valera, *Obras Completas*, Tomo 53; Pelayo Quintero Atauri, *Pintores Jerezanos en el Museo de Bellas Artes de Cádiz*, and *Imitaciones y repeticiones de cuadros*; Narciso Alonso Cortés, *Historia de la literatura española*, and *Artículos histórico-literarios*; Antonio Soto, *El Madrid de la Primera República* (awarded the prize in the 1934 competition of the Ayuntamiento of Madrid); Manuel Azafia, *La invención del "Quijote" y otros ensayos*, and *En el poder y en la oposición*, 2 vols.; Estanislao Maestre, *Homenaje a Pereda*; Padre José Sanchis Civera, *Vida íntima de los Valencianos en la época foral*; Conde de Romanones, *Amadeo de Saboya*, *el Rey efímero*; Casto del Rivero, *Historia de la Imprenta en Madrid* (first prize in the competition of the Ayuntamiento de Madrid); Salvador de Madariaga, *Anarquía o Jerarquía*; Leopoldo Eijo Garay, *La persona jurídica, su concepto filosófico y derechos fundamentales que debe respetar en ella el Estado*; Luciano de Taxonera, *Antonio Maura*; Rafael Láinez Alcalá, *Pedro Berruguete, pintor de Castilla* (excellent study that won the Premio Nacional de Literatura de 1934); César Silió, *Don Alvaro de Luna y su tiempo*; Benjamín Jarnés, *Castelar, hombre de Sinaí*; Pio Baroja, *Vitrina pintoresca*; Juan de Contreras, *Historia del arte hispánico*, vol. ii (covers the Gothic in Spain and has 600 exquisite illustrations); the *Diccionario Catalá-Valenciá-Baleár* has reached fascicle 33 of vol. iii; Ramón Menéndez Pidal and E. Varón Vallejo, *Historia troyana en prosa y en verso, texto de hacia 1270*; Justo Pérez de Úrbel, *Los monjes españoles en la Edad Media*, 2 vols.; Julián Paz, *Documentos relativos a España existentes en los Archivos Nacionales de París*; Salvador Bermúdez de Castro, Marqués de Lema, *Don Pedro José Pidal, Marqués de Pidal, Primer Presidente de la Academia de Ciencias Morales y Políticas*, and *Don Salvador Bermúdez de Castro y Díez y el Romanticismo*; Enrique Díez-Canedo, *Unidad y diversidad de las letras hispánicas*; Tomás Navarro Tomás, *El acento castellano*; Ramiro de Maeztu, *La brevedad de la vida en nuestra poesía lírica*.

Lope de Vega Tercentenary. Because of the 300th anniversary of the death of Lope de Vega, Aug. 27, 1635, numerous celebrations were held throughout Spain and the three Americas. Many special studies appeared, and revivals of his plays were produced, by students and professionals, outstanding among the latter being those by Josefina Díaz de Artigas and Rafael Calvo, in the Teatro Eslava, and by Margarita Xirgu and Enrique Borrás, in the Teatro Español.

The Spanish Academy, owing to the number of deaths in recent years, has been unusually active in receptions and elections. Reception—Miguel Artigas y Ferrando; Salvador Bermúdez de Castro, Marqués de Lema; Pio Baroja; Tomás Navarro Tomás; Ramiro de Maeztu; and Enrique Díez-Canedo. Elections—Blas Cabrera and Wenceslao Fernández Flórez.—*The Spanish Academy* awarded the following prizes: the Academy's Biennial Prize—for the *Vocabulario de las obras de don Leandro Fernández de Moratín* to Federico Ruiz Morcuende; Fastenrath, for 1935, to José María Morón, for the volume of verse *Minero de estrellas*; Piquer, for 1935, to the comedy in three acts *Madre Alegría*, by Luis Fernández de Sevilla and Rafael Sepúlveda; Castillo de Chirel, to Juan López Núñez, for his *Vida y costumbres de antaño*; Luca de Tena, for 1935, to the journalist Pedro Mourlane Michelena.

Necrology. Losses have again been serious in the field of belles-lettres. Joaquín Hazafias y La Rúa, Rector of the Universidad de Sevilla, author of notable works of erudition.—Narciso Díaz de Escovar, of Málaga, known as the *poeta de los cantares*.—The Conde de las Navas, trained as a lawyer (Licenciante in Civil and Canon Law), and as an archivist, palæographer, and librarian in the School of Diplomatics, early won a chair in palæography in the University of Madrid (which he held until he retired in 1925); in 1893 he was appointed majordomo and Chief Librarian by his Majesty Alfonso XIII, which post he held until the advent of the Republic; in 1924 he became a member of the then Royal Spanish Academy; his publications are of three classes: creative (novels and tales), professional (concerning libraries and archives), and sundry (*Los vinos españoles, Aceite de olivas, El chocolate*, all thoroughly documented).

Manuel Bartolomé Cossío, the great art critic and leader in education, died Sept. 2, 1935. He was born in Haro (Logroño), Spain, in 1858. A bachelor in liberal arts, and Doctor of Jurisprudence, he was one of the favorite pupils of Francisco Giner de los Ríos, Founder and Director of the Institución Libre de Enseñanza in Madrid. Upon the death of Giner de los Ríos, Cossío became Director and continued his master's work until his own death. He became Director of the Museo Pedagógico Nacional in Madrid, and somewhat later the first occupant of the Chair of Pedagogy in the University of Madrid, both of which posts he held until his statutory retirement from the former post (Feb. 22, 1929), upon which occasion the government created for him the title of Honorary Director. In 1904 he was Spain's educational delegate to the Saint Louis Exposition, and ever thereafter he represented Spain in most of the international educational congresses held in Europe and the Americas. Despite his pedagogical duties, he found time for profound investigations concerning the great Spanish painter El Greco. In 1908, he published the results in two volumes entitled *El Greco*, and the critics have acclaimed it the most authoritative work that has appeared on the subject. He always abstained from politics, but when the Republic came into being he was offered the Presidency. He declined the honor, but devoted himself to reforming the educational work of Spain, being really the heart and soul thereof. In April, 1934, the Republic proclaimed him its first "Ciudadano de Honor." The great surgeon, philosopher, and littérateur, Gregorio Marañón, said of him: "It is difficult to tell all that he has been. But it can be asserted that today the death of no other person would cause so many noble Spaniards to weep, as his has."

SPITSBERGEN. See SVALBARD.

SPORTS. Articles covering the activities in the various sports during 1935 will be found under such titles as, ATHLETICS; BASEBALL; FOOTBALL; GOLF; POLO; TENNIS; YACHTING; ETC.

STANFORD UNIVERSITY. A privately endowed institution of higher education, nonsectarian and coeducational, founded in Palo Alto, Calif., in 1885 and opened in 1891 in memory of Leland Stanford, Jr. On the campus are the schools of biological sciences, business, education, engineering, hygiene and physical education, law, physical sciences, and social sciences. The school of medicine is in San Francisco, and the Hopkins marine station at Pacific Grove. The total enrollment in 1934-35 was 4000. The 1935 summer session had an

attendance of 719, while the enrollment for the autumn session was 3848. The faculty numbered 734, including 185 teaching assistants. The endowment funds amounted to \$32,005,238; the budget income for the year was \$2,728,585 plus gifts of \$216,152. There were 635,873 volumes in the libraries. President, Ray Lyman Wilbur, M.D., LL.D., Sc.D.

STATE PLANNING. The State Planning movement continued to make notable progress during 1935. The enactment of laws by 32 State Legislatures creating a State Planning Board and establishing state planning as a permanent function of government is convincing indication of the trend toward planning for the conservation and more appropriate utilization of State and national resources.

State Planning Boards have been established in all States except Louisiana and Delaware. (See National Resources Committee Circular II revised, for membership of Districts and State Planning Boards.) In addition, the National Capital Park and Planning Commission in the District of Columbia has functioned actively since its creation in 1926, the Territory of Alaska has enacted a law creating a State Planning Board and the Puerto Rico Reconstruction Administration has established an active Division of Planning to co-ordinate the planning, research, and related activities of all its divisions.

Practically all State Planning Boards started work with virtually no funds or staff, but through the provisions of the CWA followed by the FERA and WPA, funds were made available for employment of white collar unemployed technical, clerical, and stenographic help which, under the general guidance of the consultant furnished by the National Resources Board, organized and conducted programmes of surveys and research and planning. In addition, the State Planning Boards obtained assistance in the form of funds, personnel, office space and supplies from a variety of sources such as Governor's contingent funds, universities, and State bureaus. Technical members of subcommittees of many State Planning Boards also made valuable contributions through advice and the preparation of special reports.

Programmes of work undertaken by the State Planning Boards represent a variety of approaches and studies which were encouraged by the National Planning Board and its successors, recognizing the value of experiment in these early stages of development. No fixed uniform programme was recommended but instead a wide range of types of surveys, research, and study were suggested from time to time in various circulars to consultants and state planning boards.

Universities and State bureaus, as well as privately financed agencies, for many years have been directing attention to the collection of basic data and making studies of problems confronting the State and local governments. The inauguration of State planning presented an excellent opportunity to unify and co-ordinate these endeavors with its activities of collecting additional needed basic data and for initiating or accelerating studies of mutual value to all concerned.

Especially significant is the nation-wide inventory of available State and local public works projects conducted jointly by the staffs of the State Planning Boards, the State PWA offices and the State Relief offices. Several of the State Planning Boards have materially assisted the State Relief Directors in formulating programmes of work relief projects. Equally important are

the surveys and studies relating to national land utilization programmes and the conservation and development of water and other natural resources on a national scale, as well as studies of population, social and economic trends, transportation, recreation, housing, government, reorganization, etc.

The seriousness and thoroughness with which these State boards have undertaken their tasks is evidenced by the large number, variety and uniformly high quality of studies and reports they have prepared which have been of definitely practical value to Federal, State, and local agencies. These reports have been summarized by the National Resources Board in its published report *State Planning—A Review of Activities and Progress*, June, 1935, which also contains a bibliography of the reports.

During 1935 the State Planning Boards have continued to receive assistance from the National Resources Board (name changed to National Resources Committee by Executive Order of the President, June 30, 1935) through assignment of consultants, exchange of information between State and Federal agencies and development of co-operative relations with Federal agencies. See CITY, NATIONAL, STATE, AND REGIONAL PLANNING; NATIONAL RESOURCES COMMITTEE.

STATISTICAL ASSOCIATION, AMERICAN An organization founded in Boston in 1839 to foster an interest in statistics and to promote sci-

ing, "Statistical Teaching," "Statistical Technique," "Price Changes," "Statistical Controls in Business," and "Demographic Statistics."

The officers elected for 1936 were: President, Joseph S. Davis, Food Research Institute, Stanford University, California; vice-presidents, Morris A. Copeland, A. R. Crathorne, George E. Barnett, Herbert A. Toops, Henry Schultz, F. Leslie Hayford, Donald M. Marvin, Paul T. Cherington; secretary-treasurer, Frederick F. Stephan, 722 Woodward Bldg., Fifteenth and H Streets, Washington, D. C.

STATISTICS. Cost of Goods. A revised index of the cost of goods purchased by wage earners and lower-salaried workers was announced in September by the Cost of Living Division of the Bureau of Labor Statistics. In summary, the significance of this revision is given as follows: "The index of food costs is very much higher at the peak than the index previously constructed. . . . For the most part, however, the revised index of food costs parallels the course of the old index. . . . The effect of the new method of constructing the all items index is to decrease the influence of food in the index and to increase the influence of other items, particularly of rent." Table I shows the index numbers at various periods from 1913 to date. It should be noted that the lowest point on the all items index was reached in June, 1933 (129.8) as far as the current depression is concerned, and that there has been a steady rise since that time.

TABLE I—INDEXES OF THE COST OF GOODS PURCHASED BY WAGE EARNERS AND LOWER-SALARIED WORKERS IN THE LARGER CITIES OF THE UNITED STATES, COMBINED

Date	Food	Clothing	Index numbers (1913 = 100)				Miscellaneous	All items
			Rent	Fuel and light	House furniture			
Average, 1913	100 0	100 0	100 0	100 0	100 0	100 0	100 0	
December, 1914	105 0	101 0	100 0	101 0	104 0	103 0	102.7	
December, 1915	105 0	104 7	101 5	101 0	110 6	107 4	104.7	
December, 1916	126 0	120 0	102 3	108 4	127 8	113 3	116 6	
December, 1917	157 0	149 1	100 1	124 1	150 6	140 5	138 3	
December, 1918	187 3	213 4	105 3	146 0	205 0	163 3	166 9	
December, 1919	200 4	286 3	119 0	153 1	257 8	185 4	191 4	
December, 1920	183 3	271 1	142 5	192 0	278 3	205 8	195 6	
December, 1921	157 9	192 5	154 4	183 4	210 5	203 4	174 8	
December, 1922	153 2	178 4	156 0	189 0	201 8	197 3	170 3	
December, 1923	157 7	182 8	162 3	187 2	215 6	199 4	174 7	
December, 1924	157 7	177 5	165 6	184 3	207 7	199 8	174 3	
December, 1925	176 1	175 8	165 0	196 0	205 0	201 6	181 3	
December, 1926	171 3	172 7	162 8	191 4	198 6	202 1	178 3	
December, 1927	165 8	168 7	159 4	187 0	195 0	203 7	175 1	
December, 1928	163 6	167 4	155 5	185 3	189 8	205 0	173 3	
December, 1929	167 5	165 6	151 9	184 2	188 4	206 1	173 7	
December, 1930	145 9	158 1	146 7	182 2	178 4	206 3	163 6	
December, 1931	120 8	139 3	136 6	177 0	156 9	203 1	148 4	
December, 1932	102 6	124 7	118 3	166 9	137 5	197 1	133 5	
December, 1933	110 0	136 7	104 0	167 3	154 1	193 0	134 6	
November, 1934	119 1	139 7	102 0	165 4	158 3	192 9	137 8	
March, 1935	126 3	139 9	101 8	165 9	159 4	193 1	140 4	

entific methods of collecting and interpreting statistical data. The official publication is the *Journal of the American Statistical Association*.

The association's ninety-seventh annual meeting was held in New York City, Dec. 27-31, 1935. Several joint meetings were held with the American Association for Labor Legislation, American Farm Economic Association, American Sociological Society, Econometric Society, and the Population Association of America which were meeting in New York at the same time. Among the topics discussed were: "Recent Developments in the Collection of Industrial Statistics," "The Statistics of Marketing," "The Nature of the Business Cycle," "The Recovery Programme and Agriculture," "The Logic of Statistics," "Unemployment Insurance," "Old Age Pensions," "Public Health Problems," "Current Developments in Commercial Bank-

Family Income. In connection with the revision discussed above, a study of money disbursements of wage earners and lower-salaried workers was carried out. The first report of this study was concerned with the situation in Manchester, New Hampshire. Summary Table II clearly shows that a budgetary deficiency exists for all families studied having incomes below \$1500 a year and that the "excess" does not become important until the "\$2500 and over" level is reached. The figures presented also show that the size of the families studied appreciably influenced the nature of the expenditures (see Table III). The largest items in all budgets covered the cost of food.

Hourly Wages. The average earnings per hour for labor were higher in 1934 than for any year since 1931, and 12 per cent higher than in 1933, according to a report by the Bureau of Labor Statis-

TABLE II—FAMILY COMPOSITION, INCOME AND DISBURSEMENTS, YEAR ENDING AUG. 31, 1934, FOR FAMILIES OF WAGE EARNERS AND LOW-SALARIED WORKERS IN MANCHESTER, N. H.

[Preliminary figures]

Annual income group	Number of families	Average number of persons per family	Average number of earners per family ^a	Average family income	Average total current expenditures	Difference between income and current expenditures
Under \$900	10	2.6	1.3	\$ 751	\$ 844	—\$ 93
\$900 and under \$1,200	25	3.6	1.7	1,058	1,132	— 74
\$1,200 and under \$1,500	41	4.1	2.0	1,349	1,396	— 47
\$1,500 and under \$1,800	29	4.2	2.0	1,618	1,585	+ 33
\$1,800 and under \$2,100	20	4.0	2.5	1,953	1,831	+ 122
\$2,100 and under \$2,500	16	5.1	3.1	2,258	2,202	+ 56
\$2,500 and over	9	7.3	4.3	3,234	3,027	+ 207
All incomes	150	4.3	2.2	1,603	1,593	+ 10

^a Includes all persons having worked at any time during the year.

TABLE III—AVERAGE EXPENDITURES OF 150 FAMILIES OF WAGE EARNERS AND LOWER-SALARIED WORKERS, YEAR ENDING AUG. 31, 1934, IN MANCHESTER, N. H.

[Preliminary figures]

	Income group		
	Under \$1,500	Over \$1,500	All incomes
Number of families	76	74	150
Average number of persons per family	3.7	4.9	4.3
Total current expenditures	\$1,236	\$1,960	\$1,593
Distribution of current expenditures:	Per cent	Per cent	Per cent
Food	37.4	36.4	36.8
Clothing	10.5	14.2	12.7
Housing	14.3	10.6	12.1
Household operation	13.3	11.3	12.1
Furnishings and equipment	3.6	5.3	4.7
Transportation	6.2	6.9	6.6
Personal care	1.8	2.1	1.9
Medical care	4.0	3.0	3.4
Recreation	4.9	5.5	5.3
Formal education	2	.6	4
Vocation	6	.5	.6
Community welfare	1.8	2.0	1.9
Gifts	8	1.2	1.0
Other family expenditure	6	.4	.5
Total	100.0	100.0	100.0

tics. This study states that the general trend of average hourly earnings was upward from 1840 to 1929, the most rapid rises coming during the Civil and World Wars and temporary declines taking

place in periods of depression. The total effect was to produce such contrasts as that between 1920 and 1914, the index in the former year being 120 per cent higher than in the latter. In 1929 the index was at 233. There then followed what the report characterizes as "the most appalling and destructive depression that has occurred in this country." By 1933 the index number was 26.3 per cent below the 1929 level. Since then, the rise recorded above has taken place. Table IV gives the index numbers from 1840 through 1934.

TABLE IV—INDEX NUMBERS OF AVERAGE EARNINGS PER HOUR (EXCLUSIVE OF AGRICULTURE), 1840 TO 1934

[Based on currency or legal tender of United States. Average per hour in 1913 = 100]

Year	Index number	Year	Index number
1840	33	1920	234
1845	33	1921	218
1850	35	1922	208
1855	38	1923	217
1860	39	1924	223
1865	58	1925	226
1870	67	1926	229
1875	67	1927	231
1880	60	1928	232
1885	64	1929	233
1890	69	1930	229
1895	68	1931	217
1900	73	1932	186
1905	82	1933	178
1910	93	1934	200
1915	103		

TABLE V—NATIONAL INCOME PAID OUT, BY TYPES OF PAYMENT

Type of payment	1929	1930	1931	1932	1933	1934
		Amount	(in millions of dollars)			
Total income paid out	78,576	72,973	61,433	47,964	44,431	49,440
Labor income	51,088	46,844	39,444	30,643	29,121	33,109
Salaries (selected industries) ^a	5,664	5,551	4,606	3,387	2,997	3,196
Wages (selected industries) ^a	17,197	14,251	10,608	7,017	7,189	8,944
Salaries and wages (all other industries)	27,291	26,052	23,148	19,141	17,325	18,675
Work-relief wages ^b .....	.....	.....	.....	.....	637	1,394
Other labor income	936	990	1,082	1,098	973	900
Property income ^c	11,632	11,719	10,076	8,189	6,995	7,143
Dividends	5,963	5,794	4,312	2,749	2,042	2,307
Interest	5,104	5,310	5,228	5,048	4,569	4,509
Net rents and royalties	3,432	2,763	1,847	1,153	950	1,085
Entrepreneurial withdrawals	12,424	11,647	10,066	7,979	7,365	8,103
		Index numbers (1929 = 100.0)				
Total income paid out	100.0	92.9	78.2	61.0	56.5	62.9
Labor income	100.0	91.7	77.2	60.0	57.0	64.8
Salaries (selected industries) ^a	100.0	98.0	81.3	59.8	52.9	56.4
Wages (selected industries) ^a	100.0	82.9	61.7	40.8	41.8	52.0
Salaries and wages (all other industries)	100.0	95.5	84.8	70.1	63.5	68.4
Other labor income	100.0	105.8	115.6	117.3	104.0	96.2
Property income ^c	100.0	100.7	86.6	70.4	60.1	61.4
Dividends	100.0	97.2	72.3	46.1	34.2	38.7
Interest	100.0	104.0	102.4	98.9	89.5	88.3
Net rents and royalties	100.0	80.5	53.8	33.6	27.7	31.6
Entrepreneurial withdrawals	100.0	93.7	81.0	64.2	59.3	65.2

^a Includes mining, manufacturing, construction, steam railroads, Pullman, railway express, water transportation.^b Includes pay rolls and maintenance of Civilian Conservation Corps enrollees and pay rolls of Civil Works Administration and Federal Emergency Relief Administration work projects plus administrative pay rolls outside of Washington. ^c Includes net balance of international flow of property incomes.

National Income. The Division of Economic Research, Bureau of Foreign and Domestic Commerce reported in August that the national income increased by five billion dollars, or 11 per cent, between 1933 and 1934. All types of income rose except "other labor income" and interest payments, but the highest proportionate gains came in those types of income payment that had declined most as a result of the depression. An interesting innovation in this report was the effort to include relief payments in the national income figures. This procedure does not meet with the approval of all economists who consider relief allowances, not income but drafts on capital accumulations. See Table V.

Wholesale Prices. An index of wholesale prices extending over 134 years, 1801 to 1934 inclusive, was announced by the Bureau of Labor Statistics in July. The index was based on the earlier work along these lines done by Prof. Alvin H. Hansen. This index reflects the influence of the major wars in which the United States has participated and the depressions through which the country has passed. The low point was reached in 1896 (46.5), but since the opening of the 20th century, the trend has generally been upward, but it is interesting to note that the last time the index reached 100 was in 1926 and that in 1929 it stood at 95.3. See Table VI.

TABLE VI—INDEX NUMBERS OF WHOLESALE PRICES, 1801 TO 1934
[1926 = 100.0]

Year	Index number	Year	Index number	Year	Index number	Year	Index number
1801	111.8	1835	74.6	1869	93.5	1903	59.6
1802	91.8	1836	83.5	1870	86.7	1904	59.7
1803	93.9	1837	82.8	1871	82.8	1905	60.1
1804	101.5	1838	79.4	1872	84.5	1906	61.8
1805	104.2	1839	81.5	1873	81.7	1907	65.2
1806	102.2	1840	71.1	1874	81.0	1908	62.9
1807	96.0	1841	70.5	1875	77.7	1909	67.6
1808	93.9	1842	65.7	1876	72.0	1910	70.4
1809	98.7	1843	61.8	1877	67.5	1911	64.9
1810	107.7	1844	62.1	1878	61.7	1912	69.1
1811	104.9	1845	62.6	1879	58.8	1913	69.8
1812	106.3	1846	64.8	1880	65.1	1914	68.1
1813	123.6	1847	64.9	1881	64.4	1915	69.5
1814	154.6	1848	61.8	1882	60.1	1916	85.5
1815	121.5	1849	60.1	1883	64.6	1917	117.5
1816	103.5	1850	62.3	1884	60.5	1918	131.3
1817	104.2	1851	64.5	1885	56.6	1919	138.6
1818	102.2	1852	62.5	1886	56.0	1920	154.4
1819	89.7	1853	60.4	1887	56.4	1921	97.6
1820	76.6	1854	68.8	1888	57.4	1922	96.7
1821	73.2	1855	68.9	1889	57.4	1923	100.6
1822	75.2	1856	68.9	1890	56.2	1924	98.1
1823	71.8	1857	68.5	1891	55.8	1925	103.5
1824	71.1	1858	62.0	1892	52.2	1926	100.0
1825	71.8	1859	61.0	1893	53.4	1927	95.4
1826	71.1	1860	60.9	1894	47.9	1928	96.7
1827	71.8	1861	61.3	1895	48.8	1929	95.3
1828	68.3	1862	71.7	1896	46.5	1930	86.4
1829	67.6	1863	90.5	1897	46.6	1931	73.0
1830	65.6	1864	116.0	1898	48.5	1932	64.8
1831	70.4	1865	132.0	1899	52.2	1933	65.9
1832	71.1	1866	116.3	1900	50.1	1934	74.9
1833	70.4	1867	104.9	1901	55.3		
1834	65.6	1868	97.7	1902	58.9		

STAVISKY SCANDAL. See FRANCE under History.

STEAM TURBINES. Steam turbine practice during the past year reflected a demand for back-pressure turbines operating at high initial pressures and higher temperatures and exhausting to existing equipment in the stations. This was in line with the general trend, in both industrial plants and central stations, toward the use of higher pressures and temperatures and the super-

imposing of new capacity on old capacity instead of building new plants. Also an increasing number of extraction turbines were installed in industrial power plants. In many of these closer automatic regulation of the steam extracted for process was a requirement. New forms of hydraulic governor control were also brought out.

The growing importance of 3600 r.p.m. machines is noted, one back pressure turbine of 40,000 kw (kilowatts) capacity having been sold to run at this speed. This is twice the capacity of any previous machine designed for this rotative speed. One company announces that it is prepared to build turbines up to 50,000 kw at 3600 r.p.m. and up to 200,000 kw for 1200 lb. pressure, 1000° F steam temperature and 1800 r.p.m. Condensing turbines for 1800 r.p.m. are offered up to 100,000 kw in the single exhaust design and 200,000 kw in the double-flow design. Single-casing, 3600 r.p.m. condensing turbines up to 15,000 kw for 400 lb. steam pressure and up to 2500 kw for 1200 lb. pressure, 900° F temperature are also offered.

As to advances in structural details the low-pressure casings of some units were being welded, and welding was also employed for the valve chest and for parts where single castings would be complicated and difficult to make. Moisture from condensation of the steam in the low-pressure stages, where high peripheral speeds obtain, has long been a cause of blade erosion. Provision of suitable drains in the casing has helped to lessen this difficulty but the employment of stellite shields on the low-pressure blading appears to be the most effective means devised to date. As a rule, blade materials that have the necessary resistance to erosion do not have the required strength and other desirable properties. Employment of higher steam temperatures has obviated the necessity of reheating the steam between the high-pressure and the low-pressure elements. Different blade materials are being used by different builders for various steam and service conditions; for instance, chromium alloys and molybdenum alloys are often employed where high temperatures and high stresses are encountered.

Among some of the more important turbines recently placed in service or being built may be mentioned a 110,000 kw, 1200 lb., 925° F vertical condensing unit for the Rouge plant of the Ford Motor Company. This was the largest high-pressure machine to date. It will exhaust to a condenser of 73,000 sq. ft., having a feedwater heater placed directly in the shell above the tubes.

In August, 1935, a 165,000 kw tandem-compound turbine was placed in service at the Richmond Station of the Philadelphia Electric Company. This is an 1800 r.p.m. machine taking steam at 375 lb. pressure, and 825° F of temperature. It exhausts to the largest single shell condenser yet built, which contains 113,000 sq. ft. of heating surface and 17,700 tubes.

Another large turbine that went into operation during the year was the 80,000 kw, 1230 lb. pressure unit at the Port Washington Station of the Milwaukee Electric Railway, Power & Light Company. It is supplied by a single boiler of 690,000 lb. of steam per hour capacity.

Toward the end of the year a 40,000 kw, 3600 r.p.m., turbine-generator was ordered for the Logan Station of the Appalachian Power Company. This will operate at 1250 lb. pressure, 925° F steam temperature and exhaust at 215 lb. back-pressure to the existing station mains. The generator of the unit will be hydrogen cooled.

There was also ordered for the Waterside Station of the New York Edison Company a 50,000 kw, 60 cycle, turbine-generator to operate at 1400 lb. pressure, 900° F temperature and exhaust to the present station equipment at approximately 200 lb. pressure.

Two other large units of 60,000 kw each were being built for the Conners Creek Station of the Detroit Edison Company to operate at 600 lb. pressure, and 825° F temperature.

In the industrial field a considerable number of turbines of medium capacity were installed to operate at pressures ranging from 400 to 900 lb. and with steam temperatures up to 850° F. The greater part of these were for back-pressure or extraction operation.

STEVENS INSTITUTE OF TECHNOLOGY. A college of engineering at Hoboken, N. J., founded in 1870. The enrollment for the autumn of 1935 was 452 undergraduate and 18 graduate students. There were 60 members on the teaching staff. The income for 1934-35 was \$370,000. President, Harvey Nathaniel Davis, Ph.D.

STRAITS SETTLEMENTS. A British crown colony comprising the four settlements of Singapore (including Christmas and Cocos-Keeling Islands), Penang (including Province Wellesley), Malacca, and Labuan. Total area, 1352 sq. miles; total population (June 30, 1934), 1,038,903 exclusive of the Dindings (183 sq. m.; 18,205 people) retroceded to Perak, Federated Malay States, on Feb. 16, 1935. Chief towns: Singapore (capital), 433,432 inhabitants in 1931; George Town (Penang); Malacca; Victoria.

Production and Trade. In 1934 the main products were rubber (59,683 tons), coconuts, coffee, rice (42,034 tons), pineapples, fish, tin (67.78 tons), and phosphate of lime, from Christmas Island (129,191 tons). The tin smelters produced (principally from imported ore) 49,637 tons of tin during 1934. In 1934, imports were valued at \$428,000,000; exports, \$459,000,000 (S\$ averaged \$0.5901 for 1934). The merchant vessels that entered and cleared the ports during 1934 aggregated 44,006,480 tons.

Government. For 1934, revenue amounted to \$34,244,603; expenditure, \$30,937,262. The public debt on Dec. 31, 1934, was \$59,257,302 against which the sinking fund was valued at \$20,161,364. Government was vested in a governor assisted by an executive council of 11 members, and a legislative council of 26 members. Governor in 1935, Sir Shenton Thomas.

History. The extension of the passenger air service from Singapore to Australia on the London to Australia route was in operation during 1935. It was announced in December that George Town (Penang), Straits Settlements, was to be a scheduled stop for Imperial Airways in place of Alor Star in Kedah, Unfederated Malay States.

STRATOSPHERE FLIGHT. See AERONAUTICS; GEOGRAPHIC SOCIETY, NATIONAL; PHOTOGRAPHY.

STRIKES AND LOCKOUTS. As the year 1935 draws to a close it is apparent that the wave of labor unrest which began in 1933 is continuing unabated. While the year was marked by no strikes comparable in extent and intensity to the San Francisco general strike and the textile strike of 1934, several smaller disturbances of great significance took place, notably the strike at the N. Y. Shipbuilding Corporation, Camden, N. J., the Terre Haute General Strike in July, that in the National Biscuit Company plants in the East, the Ohrbach strike in New York City, the Newark Ledger strike, and the lumber workers' strike in Washington, Oregon, and California. These will be the subjects of special discussion below.

Table I shows that the number of man-days idle in September, 1935, was greater than in any month during 1934 with the exception of September, when the textile strike was in progress. The industries most subject to disturbances in 1935 were textiles, transportation and communications, building and construction, food, wholesale and retail trade, coal, and lumber. The year was also marked by a large number of strikes on work relief projects, these usually being supported in some measure by the regularly employed workers organized in trade unions. From April and continuing through Sep-

TABLE I—STRIKES AND LOCKOUTS, JANUARY, 1934 TO DECEMBER, 1935

Month	Number of strikes and lockouts					Workers involved in strikes and lockouts		
	Beginning—		In progress during month	Ended in month	In effect at end of month	Beginning in month	In progress during month	Man-days idle during month
	Prior to month	In month						
1934								
January	30	91	121	78	43	41,628	80,880	668,301
February	43	92	135	83	52	85,727	110,910	939,580
March	52	164	216	146	70	94,117	127,742	1,424,833
April	70	211	281	179	102	158,887	199,580	2,517,749
May	102	224	326	217	109	165,815	249,693	2,226,069
June	109	156	265	135	130	41,263	106,852	1,676,265
July	130	128	258	160	98	151,432	219,037	2,020,172
August	98	157	255	149	106	63,447	122,144	1,735,672
September	106	127	233	148	85	413,383	486,798	4,029,155
October	85	175	260	171	89	75,688	102,971	852,787
November	89	114	203	106	97	36,102	98,201	841,570
December	97	101	198	120	78	26,119	73,481	376,297
1935								
January	73	140	213	131	82	81,110	92,546	720,350
February	82	148	230	129	101	62,363	94,448	826,128
March	101	174	275	161	114	52,124	95,617	930,215
April	114	173	287	158	129	67,584	122,206	1,168,116
May	129	169	298	174	124	102,210	150,587	1,691,869
June	124	174	298	181	117	46,862	127,324	1,286,886
July	117	172	289	166	123	67,884	137,468	1,253,185
August	123	227	350	217	133	73,111	147,025	1,194,743
September	133	140	273	150	123	452,712	510,344	2,991,176
October	123	172	295	181	114	85,742	135,652	1,760,886
November	114	119	233	128	105	34,661	100,780	1,120,775
December *	105	90	195	110	85	15,000	60,000	697,000

* Preliminary figures.

tember, there were never less than 100,000 men on strike, and in the latter month the figure shot up to 518,000 when the bituminous coal miners went out for one week.

Some reasonable idea of the nature of the industrial unrest of 1935 can be gained by making an analysis of the situation by months from January through June in the industries particularly affected, specified above, and where such an analysis is impossible, in general:

January: 29 strikes in *textiles* began in January, involving 25,408 workers, and 46 all told were then in progress, involving 29,068 workers. The same figures for *transportation and communication* were 14 involving 22,827 and 19 involving 23,696; for *building*, 6 involving 1854 and 11 involving 2255; for *food*, 7 involving 5927 and 14 involving 6631; in *wholesale and retail trade*, 11 involving 969 and 17 involving 2019; in *coal*, 4 involving 5830 and 6 involving 6247; in *lumber*, 4 involving 153 and 6 involving 186; and in *relief*, 6 involving 7266 and 8 involving 7831. More than 5000 workers were involved in each of the following States: New Jersey, New York, Pennsylvania. Of the strikes beginning in January, 41.6 per cent were wage disputes, 13.6 involved discrimination, the rest being attributed to a miscellany of causes. Of the 111 ended during the month 45 lasted less than a week and but three for three months or more. The settlements were brought about by government conciliators or labor boards in over half of the instances. Half of them were settled in a manner favorable to labor, one-fourth unfavorably to labor, the rest being difficult to interpret.

February: 31 strikes in *textiles* began in February, involving 16,620 workers, and 44 all told were in progress involving 19,733 workers; in *transportation and communication*, 10 involving 1030 and 13 involving 1145; in *building*, 6 involving 359 and 9 involving 391; in *food*, 6 involving 2282 and 15 involving 8168; in *wholesale and retail trade*, 11 involving 4790 and 14 involving 5030; in *coal*, 8 involving 15,202 and 10 involving 19,372; in *lumber*, 12 involving 657 and 16 involving 782; and in *relief*, 7 involving 3101 and 10 involving 10,181. More than 5000 workers were involved in each of the following States: Illinois, New Jersey, New York, Ohio, Pennsylvania. Of the strikes beginning in February, 29.1 per cent were wage disputes, 17.5 involved discrimination, and 10 per cent the closed shop. Of the 114 ended in the month, 48 lasted less than one week, and but two three months or more. Settlements were negotiated by government labor boards or conciliators in just short of half of the instances, half of the settlements were favorable to labor, and one-third unfavorable.

March: 40 strikes in *textiles* began in March, involving 8469 workers, and 65 all told were then in progress involving 25,475 workers; in *transportation and communication*, 16 involving 4936 and 18 involving 5176; in *building*, 8 involving 1263 and 13 involving 1653; in *food*, 5 involving 3381 and 15 involving 8861; in *wholesale and retail trade*, 7 involving 966 and 14 involving 5377; in *coal*, 5 involving 6873 and 7 involving 12,973; in *lumber*, 7 involving 1449 and 16 involving 11,345; and in *relief*, 6 involving 1902 and 12 involving 5093. More than 5000 workers were involved in each of the following States: California, Illinois, New York, Ohio, Pennsylvania. Of the March strikes, 30 per cent originated in wage disputes, 14 per cent concerned discrimination, and 13 per cent were for recognition. Of the strikes ended, 48 had lasted less than a week and but 4 for three months or more. Government conciliators and labor boards settled 38 per cent of them, and employer-union negotiations, 35 per cent. Over half of the settlements were favorable to labor, and a little more than a quarter unfavorable.

April: 23 strikes in *textiles* began in April involving 23,777 workers, and 53 were in progress all told involving 41,692, in *transportation and communication*, 7 involving 2192 and 16 involving 4612; in *building*, 16 involving 786 and 21 involving 1842; in *food*, 10 involving 1747 and 19 involving 7146; in *wholesale and retail trade*, 12 involving 1408 and 18 involving 2617; in *coal*, 5 involving 1849 and 8 involving 14,229; in *lumber*, 16 involving 4063 and 22 involving 4597, and in *relief*, 12 involving 1358 and 17 involving 3661. More than 5000 workers were involved in each of the following States in strikes beginning in April: New York, Ohio, Pennsylvania. Of the April strikes, 40 per cent concerned wages. Of those ending during the month, 50 lasted less than a week and but 3 for three months or longer. Government conciliators or labor boards negotiated 36 per cent of the settlements and 35 per cent were arranged by employer-union negotiations. A little less than half ended favorably to labor and about a quarter unfavorably.

May: 14 new strikes occurred in *textiles* during May involving 5569 workers, making 39 in progress all told involving 12,297 workers; in *transportation and communication*, 19 involving 3297 and 28 involving 6792; in *building*, 15 involving 1794 and 25 involving 2229; in *food*, 11 involving 3593 and 20 involving 5130; in *wholesale and retail*

trade, 6 involving 388 and 15 involving 2664; in *coal*, 6 involving 12,654 and 7 involving 18,964; in *lumber*, 13 involving 42,427 and 25 involving 44,892; and in *relief*, 3 involving 692 and 6 involving 2487. More than 5000 workers were involved in each of the following States: Illinois, New Jersey, Ohio, Pennsylvania. Of the May strikes, 42 per cent involved wages. Of the strikes ended, 59 had lasted less than a week and 8 had lasted three months or more. Government conciliators and labor boards settled 35 per cent of them, and employer-union negotiators 36 per cent. A little less than half ended favorably to labor and about a quarter unfavorably.

June: 57 new strikes in *textiles* began in June involving 16,385 workers and 82 all told were in progress involving 24,829 workers, in *transportation and communication*, 6 involving 4154 and 18 involving 6907; in *building*, 9 involving 1120 and 16 involving 1847; in *food*, 12 involving 3032 and 19 involving 3689; in *wholesale and retail trade*, 8 involving 905 and 17 involving 1896; in *coal*, 6 involving 4776 and 10 involving 14,045; in *lumber*, 7 involving 1744 and 18 involving 38,722; and in *relief*, 3 involving 91 and 5 involving 1831.

Of the June strikes, 46 per cent involved wages. Of the strikes ended 51 had lasted less than a week and 11 three months or more. Government conciliators and labor boards arranged 31 per cent of the settlements, and 33 per cent were brought about by employer-union negotiations. Over two-fifths were settled favorably to the workers, and 36 per cent ended unfavorably.

From these summaries several generalizations can be drawn: (a) that in industries known to be in a disturbed state, like textiles, the persistence of small strikes is very notable; (b) that the States with large numbers of workers out on strike fairly constantly are the highly industrialized States; (c) that wage disputes are by far the most important causative factor; (d) that most strikes are of short duration; (e) that most of the settlements are brought about outside governmental channels; (f) and that labor has about a 50-50 chance of winning its demands in any given instance.

Camden Shipyard Strike. Several strikes which took place during the nine-month interval under review demand special comment. Over 4000 workers in the Camden yards of the N. Y. Shipbuilding Corporation, organized in the Industrial Union of Marine and Shipbuilding Workers (not A.F. of L.), were out on strike for a period of 15½ weeks ending Aug. 29, 1935. There were 15 specific issues involved, including a wage increase and the closed shop. The strike was a sharp struggle on both sides, for long completely baffling to the Federal conciliators and labor boards, and complicated by the fact that the company held a large naval contract, thus bringing the Navy Department into the picture. The picketing was noticeably intense and highly successful. After repeated failure had marked all efforts on the part of existing organizations to effect an agreement, the President appointed the Camden Arbitration Board to which both sides agreed to submit their cases and abide by the decision. As announced on October 12, the decision provided, among other things, for the 8-hour day, 36-hour week, 1½ rate for overtime and double time for holidays; a 5 per cent increase in piece work and basic hourly rates; and a prohibition of strikes and lockouts during the life of the agreement which is defined as equivalent to the length of time it will take to complete the Navy Department contracts.

National Biscuit Co. Strike. The National Biscuit Company strike began in January, 1935, and continued until May 2nd to the accompaniment of picketing not only of the factories involved but also stores selling products of the company. The sympathetic cooperation with the strikers of various "consumer" groups was notable. Originating in a wage dispute in the Philadelphia plant, the strike spread, on a sympathetic basis, to the factories in New York City, Newark, N. J., York, Pa., and Atlanta, Ga., eventually involving over

6000 workers. The settlement was brought about by the intervention of Federal and State mediators and included a provision against discrimination in rehiring, one for an adjustment of wage rates, and one concerning the specific improvement of working conditions. It was also agreed that no strike would be called in the future without a 72-hour notice preceded by a secret ballot of union members.

Newark Ledger Strike. On Mar. 28, 1935, an agreement between the Newark Newspaper Guild and the trustees of the Newark Morning *Ledger* brought to an end a strike, begun on Nov. 17, 1934, which had involved 43 newspaper men. It too was punctuated by picketing, mass demonstrations, and nation-wide publicity. Moreover it was the first strike attempted by the Guild and involved what were unquestionably white collar workers. Precipitated by the discharge of the workers for membership in the Guild, the settlement provided for the return of all discriminated against and the negotiation of a wage and hour agreement with the organization.

Ohrbach Stores Strike. The strike in the Ohrbach's Affiliated Stores followed somewhat the precedent established by the so-called Boston Store strike in Milwaukee, described as "America's first major retail department-store strike." The latter lasted from Nov. 30, 1934, until Jan. 11, 1935, and while the settlement effected did not please all the workers, the unions involved accepted it and ended the boycott against the management. The settlement included wage adjustments and a guarantee against discrimination in rehiring the striking workers. The Ohrbach strike began on Dec. 15, 1934, and ended Mar. 8, 1935. It was called by the Office Workers' Union because of the refusal of the management to negotiate, the allegation being that the Union represented but a minority of the employees. The strike was punctuated by vigorous picketing and mass arrests of the pickets, as well as the intervention of a group of artists and writers on the side of the strikers. The settlement, arranged by the Regional Labor Relations Board, amounted to a return to *status quo ante bellum*.

Northwest Lumber Strike. A strike which can only be understood in relation to the depletion of a natural resource is the great lumber strike in the northwest. Half of the manufacturing wage earners in Washington and Oregon are engaged in the lumbering industry and they constitute one-fourth of all such workers in the United States. They are divisible into two groups of about equal size, the loggers and the mill workers. As the timber becomes exhausted in one area, the workers are moved to another, thus making for the development of casual labor and the chaotic social conditions it implies. In addition there are marked seasonal fluctuations in employment due to weather conditions both as they effect the industry itself and the demand for its products. Finally, there has been considerable technological displacement since the World War. When strike agitation began in March, 1935, average wages in the industry were but \$18.88 per week for males, as contrasted with \$21.09 for all workers in manufacturing industries, and the accident rate was $3\frac{1}{2}$ times as frequent. The strike officially began on May 6 and reached its peak early in June and while many plants made agreements with the two principal unions during the period of the strike and reopened their works, the struggle did not end until the middle of August. By and large it was inconclusive, the full wage demand not having been met, but the unions claim-

ing that they are now dominant in the industry for the first time since the World War.

Terre Haute General Strike. The Terre Haute general strike was a national issue and though it lasted but two days—July 22 and 23, 1935—the ultimate consequences had not appeared at the end of the year. It was the third general strike in American history, those preceding being at Seattle in 1919 and San Francisco in 1934. It grew out of a strike in the plant of the Columbian Enameling & Stamping Company which had been in progress since Mar. 23, 1935. Although government conciliators and the A.F. of L. national officials succeeded in calling off the general strike, the Columbian strike continued, as also did martial law.

See ILLINOIS, INDIANA, and SOUTH CAROLINA under *Political and Other Events*; COAL.

STYRIA. See AUSTRIA.

SUCCESION STATES. See LITTLE EN-TENTE.

SUDAN. See ANGLO-EGYPTIAN SUDAN; FRENCH WEST AFRICA.

SUEZ CANAL. Traffic in the Suez Canal for 1934, as reported at the annual meeting of the directors of the Compagnie Universelle du Canal Maritime de Suez in June, 1935, showed an increase in net tonnage of 3.5 per cent over 1933, and slightly surpassed that of 1930. The total for the year amounted to 31,750,802 net tons, against the final net tonnage of 1933 of 30,676,672; with 28,340,290 net tons for 1932, 30,027,911 for 1931, and 31,668,759 for 1930. French, Japanese, Portuguese, and Russian traffic showed heavy declines; otherwise the leading mercantile nations showed a substantial increase in tonnage. The accompanying table gives the total transits and net tonnage of the leading nations for the year.

SUEZ CANAL COMMERCIAL TRAFFIC

Flag	No. of transits	Net tonnage	
		1934	1933
American	84	524,089	485,513
British	3,071	17,238,128	16,018,235
Danish ..	76	419,263	429,823
Dutch	378	2,559,182	2,301,845
Egyptian ..	12	41,444	..
Finnish	7	25,849	15,234
French	305	1,976,285	2,044,766
German	509	2,976,451	2,566,361
Greek	164	583,852	136,996
Hungarian	3	12,261	..
Italian	435	2,089,003	1,624,224
Japanese	216	1,223,744	1,608,752
Norwegian	291	1,544,050	1,141,246
Panaman	3	13,753	3,980
Portuguese	1	1,698	11,799
Russian ..	20	58,411	370,424
Spanish	1	1,628	..
Swedish ..	79	444,127	434,162
Yugoslav ..	6	16,922	2,913
Total ..	5,663	31,750,802	30,676,672

The net tonnage of vessels passing through the canal with cargo only during 1935 was 21,048,000 (20,940,000 in 1934). The canal during 1935 was used for the transportation to Eritrea and Italian Somaliland of the armies and supplies with which Premier Mussolini undertook the conquest of Ethiopia (q.v.), commencing Oct. 3. With the development of the Anglo-Italian crisis over Ethiopia and the application of economic sanctions against Italy by the member states of the League of Nations, there was much discussion of the advisability of closing the canal to Italian vessels, but no such action was taken up to the end of 1935. See GREAT BRITAIN, ITALY, and EGYPT under *History*.

SUGAR. Preliminary data published by the U.S. Department of Agriculture placed the world's raw sugar production in 1934-35 at 27,958,000 short tons of which nearly 37 per cent was beet sugar. The cane sugar production was reported distributed approximately as follows: North and Central America and the West Indies 5,640,000 tons, Europe and Asia 8,265,000 tons, South America 1,800,000 tons, Africa 901,000 tons, and Oceania 853,000 tons. The yields, also in short tons, of the leading cane sugar producing countries were estimated as follows: India 5,695,000 tons, Cuba 2,592,800 tons, Taiwan 1,101,200 tons, Hawaii 952,000 tons, Philippines 824,000 tons, Puerto Rico 784,000 tons, Brazil 771,000 tons, and Java 504,000 tons. The 26 countries reporting to the International Institute of Agriculture placed their total production of raw beet sugar for the season 1935-36 at approximately 10,636,000 tons. The yields of the leading countries were given as follows: Soviet Republics 1,984,000 tons, Germany 1,768,500 tons, France 1,065,000 tons, Great Britain 700,000 tons, and Czechoslovakia 614,400 tons.

The 1935 sugar beet production of the United States as estimated (preliminary) by the Department of Agriculture was 7,984,000 short tons, about 500,000 tons more than the crop of 1934 and approximately 3,000,000 tons less than the record crop of 1933. The yield per acre 10.4 tons, was about average and the sugar content of the sliced beets, 16.48 per cent, was reported as about 10 per cent better than average. The production of beet sugar was estimated at 1,170,000 tons compared with 1,154,000 tons in 1934 and 1,642,000 tons in 1933. The average farm price per ton of beets was about \$5.15 in 1935 and 1934. The sugar beet production of the leading States was reported as follows: Colorado 1,811,000 tons, California 1,453,000 tons, and Michigan 712,000 tons. The production of these States of beet sugar, mostly refined, was estimated at 290,000 tons, 238,000 tons, and 100,000 tons respectively.

The 1935 cane sugar production of Louisiana was estimated at 291,000 short tons from 3,756,000 short tons of cane. This State produced in addition 6,598,000 gal. of cane sirup and 21,034,000 gal. of molasses. Eight southern States including Louisiana reported a total sugar cane sirup production of 24,699,000 gal. from 145,000 acres of cane. Sixteen States, with Alabama leading, produced 12,438,000 gal. of sorgo sirup and 10 States, with Vermont and New York leading, produced 1,704,000 lb. of maple sugar and 3,377,000 gal. of maple sirup.

During the fiscal year ended June 30, 1935, the United States exported 152,000 short tons of sugar, 409,000 gal. of cane and maple sirup, and 4,764,000 gal. of molasses and imported 2,375,000 tons of sugar.

SUMATRA. See NETHERLAND INDIA.

SUNDAY, WILLIAM ASHLEY ("BILLY"). An American evangelist, died in Chicago, Nov. 6, 1935. Born in Ames, Ia., Nov. 19, 1863, he attended Northwestern University for a short time and in 1883 became a professional baseball player playing with the Pittsburgh and Philadelphia teams of the National League. Attending a revival meeting in Chicago in 1886, he was converted, and gave up his baseball career in 1890 to become an assistant secretary in a YMCA in Chicago in 1891.

In 1896, Mr. Sunday became an evangelist, and from that time conducted evangelistic services in the principal cities of the United States. The Chicago Presbytery ordained him to the Presbyterian ministry in 1903, and during the period 1904 to 1907 he made an average of from 1000 to 5000 con-

verts a month. The revival meeting held at Philadelphia in 1915 was considered his most successful. Two years later, however, a ten-week meeting was held in New York City, where 98,000 persons professed conversion. At the General Assembly of the Presbyterian Church in the United States held in Columbus, O., in May, 1918, he served as a delegate of the Chicago Presbytery. In 1912, Westminster College conferred upon him the degree of Doctor of Divinity.

His forceful preaching, often full of invective and denunciation, brought him to the public eye, and his meetings, characterized by good music and the "sawdust trail," the aisle down which the converts went to the altar, attracted thousands of people of every walk of life. An ardent prohibitionist his sermons were frequently delivered against the devil and the demon rum.

In 1933, Dr. Sunday suffered a heart attack while conducting a revival at Des Moines, Ia., and for several months he left the evangelist field. In 1934 he returned to conduct a two weeks' revival meeting in New York. Poor health again caused him to retire except for an occasional sermon delivered in the vicinity of his home.

SUNDAY-SCHOOL UNION, AMERICAN. A nonsectarian society, organized in Philadelphia in 1817 to establish and maintain Sunday schools in the rural and mountain sections of the United States and to publish and circulate Christian literature. Its board of managers and missionary force are composed of men representing many of the Protestant denominations. For the year ending Feb. 28, 1935, the society maintained 3705 union Sunday schools, with 148,883 scholars, and conducted 901 daily vacation Bible schools, with 25,526 in attendance. During the same period it established 177 young people's societies, opened 79 preaching stations, organized 20 churches which were turned over to the various denominations chosen by their constituencies, and erected six church buildings. The officers were: President, E. Clarence Miller, LL.D.; vice-presidents, Robert L. Latimer and James F. Shrader; national secretary of missions, Elliott D. Parkhill, D.D.; editor of publications, Arthur M. Baker, Ph.D.; and treasurer, John H. Talley. National office is at 1816 Chestnut Street, Philadelphia, Pa.

SUPREME COURT. See UNITED STATES.

SURGEONS, AMERICAN COLLEGE OF. A college or guild (not a teaching institution), organized in 1913 by some 500 surgeons of North America to elevate the standard of surgery. Fellowships in the organization are granted on the basis of merit only, with reference to professional ability and moral and ethical fitness. In 1935 these numbered approximately 12,000.

The college's twenty-fifth annual congress was held in San Francisco, Calif., Oct. 28-Nov. 1, 1935, with an attendance of more than 2000 surgeons. The organization's official journal is *Surgery, Gynecology, and Obstetrics*.

The officers elected for 1935-36 were: President, Dr. Donald C. Balfour, Rochester, Minn.; president-elect, Dr. Eugene H. Pool, New York; vice-presidents, Drs. Arthur W. Allen, Boston, and John A. Gunn, Winnipeg; and treasurer, Dr. Frederick A. Besley, Waukegan, Ill. Since the death of Dr. Franklin H. Martin (q.v.), the directorship is invested in an Executive Committee, consisting of Drs. George Crile, Chairman, Irvin Abell, Frederick A. Besley, Robert B. Greenough, Allen B. Kanavel, George P. Muller, J. Bentley Squier, and Donald C. Balfour. Dr. Malcolm T. MacEachern and Dr. Bowman C. Crowell are associate direc-

tors. Headquarters are at 40 East Erie Street, Chicago, Ill.

SURGERY. See **MEDICINE AND SURGERY.**

SURINAM, *sōō'ri-nam'* (**DUTCH GUIANA**). A colony of the Netherlands in South America. Area, 54,291 sq. miles; population (1931), 155,888 exclusive of Negroes and Indians living in the forests. Paramaribo, the capital, had 50,294 inhabitants. Sugar, cacao, coffee, rice, rum, bananas, balata, and bauxite were the main export products. In 1933, imports were valued at 4,899,186 guilders; exports, 3,801,671 guilders (guilder averaged \$0.5146 for 1933). The budget for 1935 was balanced at 6,744,000 guilders (including a government subvention of 2,688,000 guilders). The colony was administered by a governor assisted by an advisory council. Governor, Dr. J. C. Kielstra.

SVALBARD, *sval'bar*. An archipelago owned by Norway, comprising West Spitsbergen, North East Land, Prince Charles Forland, Edge Island, Bear Island, and adjacent islands. Total area, 24,294 sq. miles; population (wintering force in 1933-34), 1942. Capital, Longyearbyen. Coal mining was the main industry. In 1934 the estimated output of coal was 477,000 metric tons. The budget for 1934-35 was balanced at 121,500 kroner (krone averaged \$0.2532 for 1934).

SWARTHMORE COLLEGE. A nonsectarian coeducational institution for higher education in Swarthmore, Pa., founded in 1864 by the Society of Friends. The 1935-36 enrollment was 640. The teaching staff numbered 96. The total endowment was \$7,000,000, and the income for the year was \$693,000. In 1935 a new Athletic Field House was built and a new Senior Dormitory for men acquired. The library contained 90,000 volumes. President, Frank Aydelotte, LL.D.

SWAZILAND, *swā'zê-lând*. A British protectorate in South Africa. Area, 6705 sq. miles; estimated population (1933), 125,775 including 122,290 natives and 2775 Europeans. Capital, Mbabane. Maize, tobacco, tin, groundnuts, cotton, and millet were the main products. Cattle raising was an important occupation. Livestock in the protectorate (1933): 309,814 cattle, 134,000 native sheep and goats, 2399 horses, 9816 asses, and 508 mules. Each year the Transvaal sends about 300,000 sheep into Swaziland for winter grazing. For customs purposes Swaziland was considered a part of the Union of South Africa and received a fixed percentage of the Union total each year.

Government. For the year ended Mar. 31, 1934, revenue totaled £93,499; expenditure, £113,858; public debt, £55,000. Government was administered by a resident commissioner under the British High Commissioner for South Africa. Resident Commissioner, A. G. Marwick (June, 1935). See **SOUTH AFRICA, UNION OF**, under *History*.

SWEDEN. A constitutional monarchy of Scandinavia. Capital, Stockholm. Sovereign in 1935, Gustaf V, who succeeded to the throne Dec. 8, 1907.

Area and Population. Sweden has an area of 173,344 square miles (land area, 158,393 sq. miles) and a population estimated in 1934 at 6,233,090 (6,141,571 at the 1931 census). The urban population in 1934 was 2,102,089. Living births in 1933 numbered 84,881; deaths, 69,579; marriages, 43,318; immigrants, 7276; emigrants, 2417. The 1934 population estimates for the chief cities were: Stockholm, 530,176; Göteborg, 255,386; Malmö, 132,552; Norrköping, 62,571; Helsingborg, 58,382. The population is predominately Lutheran in religion.

Education. Primary education is compulsory

and there is practically no illiteracy. In 1934 there were 840,440 children of school age (7 to 14 years) and the school attendance was: Elementary, 739,178; government high schools, 29,874; universities, 8636.

Production. Agriculture supports about half the population; the remainder are occupied mainly in fishing, lumbering, manufacturing, and commerce. The value of field crops in 1934 was 1,040,447,000 crowns, divided as follows (in 1000 crowns): Wheat, 120,436; rye, 75,172; oats, 140,849; potatoes, 91,009; hay, 306,815. Crop yields in 1934 were (in thousands of units): Wheat, 29,578 bu.; rye, 20,865 bu.; barley, 9462 bu.; oats, 81,364 bu.; potatoes, 58,422 bu.; sugar beets, 1862 metric tons, beet sugar (1934-35), 271 metric tons; hay, 4486 metric tons; forage roots, 3019 metric tons. The forests cover about 7,257,000 acres and support important pulpwood, paper, and wood-working industries. The sea fisheries in 1933 yielded 102,300 metric tons of fish, valued at 24,500,000 crowns.

Mineral and metallurgical production in 1934 was (in 1000 metric tons): Coal, 415; iron ore, 5253; pig iron, 558; steel ingots and castings, 861; zinc ore, 55; manganese ore, 6.3. The value of industrial production in 1933 was 4,073,935,000 crowns (3,973,840,000 in 1932), the chief industrial lines, in order of value of output in 1933, were foodstuffs, mines and metals, paper and printing, textiles and clothing, wood and its manufactures, chemicals.

Foreign Trade. Imports for consumption in 1934 were valued at 1,304,749,000 crowns (1,095,889,000 in 1933) and exports at 1,302,333,000 crowns (1,078,668,000 in 1933). Of the 1934 imports, Germany supplied 26.1 per cent (29.2 in 1933); United Kingdom, 19.5 per cent (18); United States, 11.7 (10.3). The United Kingdom took 25.5 per cent of the 1934 exports (26.9 in 1933); Germany, 13.8 (10.7); Denmark and Norway, 13.1 (11.8); and United States, 9.9 (12.2). The chief imports, in order of value, were coal and coke, iron and steel, chemicals and drugs, machinery, fruits and nuts, and corn. Leading exports were (in 1000 U.S. gold dollars): Wood pulp, 39,770; wood, 33,648; machinery, 21,567; iron and steel, 20,090; iron ore, 13,200.

Imports in 1935 totaled 1,467,955,000 crowns; exports, 1,290,794,000 crowns. United States figures showed general imports from Sweden in 1935 of \$41,244,437 (\$33,948,870 in 1934) and exports to Sweden of \$38,214,021 (\$33,064,028 in 1934).

Finance. Actual governmental revenues for the fiscal year ended June 30, 1935, totaled 1,217,141,586 crowns (1,054,023,000 crowns in 1933-34) and expenditures were 1,148,187,866 crowns (972,741,000 in 1933-34). The figures include both ordinary and capital receipts and expenditures. The public debt on June 30, 1935, totaled 2,487,098,937 crowns, compared with 2,348,962,466 crowns on June 30, 1934. The Swedish crown (krona; plural, kronor), with a par value of \$0.4537 in 1935, exchanged at an average of \$0.1847 in 1932, \$0.2203 in 1933, and \$0.2598 in 1934.

Communications. Sweden at the beginning of 1934 had 10,446 miles of state and private railway lines; 49,440 miles of highway; and air lines linking Stockholm with Helsinki and Malmö with Amsterdam. The railways in 1933 carried 64,688,000 passengers and 24,923,000 metric tons of freight, the gross receipts totaling 269,088,000 crowns. Electrification of the 383-mile railway line from Stockholm to Malmö was completed Oct. 1, 1935, raising the mileage of electrified government lines to 1331. The airlines in 1934 carried 18,072 passengers. The

gross tonnage of the merchant marine on June 30, 1935, was 1,550,800 (1,608,900 on June 30, 1934). The net register tonnage of vessels entering the ports with cargo from overseas in 1934 was 14,284,000 (13,203,000 in 1933).

Government. Executive power is vested in the King, who acts through a responsible ministry known as the Council of State, at the head of which is the Minister of State, or premier. Legislative power rests with the Diet (Riksdag) of two chambers. There is a Lower Chamber of 230 members elected for four years by universal suffrage. The 150 members of the Upper Chamber are elected for eight years by municipal and provincial councils (one-eighth annually). Premier in 1935, Per Albin Hansson (Social Democrat), appointed Sept. 24, 1932.

History. The year 1935 witnessed the celebration of the 500th anniversary of the establishment of parliamentary government in Sweden. It was appropriate that this anniversary should be accompanied by further steps toward social justice and economic security under a democratic régime such as had already established Sweden's position as one of the world's most progressive countries. A major accomplishment of this nature was the adoption by the Diet on June 8 of an advanced system of old-age pensions. Representing a marked improvement over the existing system, the measure was so comprehensive as to remove all the indigent aged from dependence upon poor-relief. It was estimated that when the system became fully effective in 1950, it would cost the government an extra 60,000,000 crowns annually.

Acting upon the recommendations of commissions which had made exhaustive studies of their respective problems, Premier Hansson's Social Democratic Government extended state control over the privately owned radio broadcasting system. Legislation was passed giving the government the right to appoint a majority of the members of the board of directors. Proposals for the establishment of state monopolies for the sale of drugs, coffee, and combustible liquids also were placed before the Diet, but did not receive its approval before the session ended on June 18. A powerful argument in favor of these proposals was the report for state enterprises for 1934, which showed net earnings of 111,100,000 crowns, or 4% per cent on the total capital investment in the undertakings.

Another important measure passed in April prohibited the manufacture of armaments in Sweden except by Swedish companies and established strict state control of all armament factories by means of a licensing system. It was provided that all new plants required a license to operate but that the existing plants might carry on unlicensed until Jan. 1, 1938. The arms-control measure was inspired largely by fear of involvement in the threatened European war, which appeared imminent following Chancellor Hitler's abrogation of the military clauses of the Versailles Treaty in March, 1935 (see GERMANY under *History*). It was also designed to end charges that some Swedish arms plants were owned by the Krupp armament firm in Germany. The extension in March of the term of army service from three months to six months and recommendations by a government commission on August 27 for a complete reorganization of the defense system at a cost of \$30,000,000 were evidences of the nation's concern at the warlike tendencies in Europe.

The breach in Swedish-German friendship caused

by the Hitler régime in Germany was further emphasized by developments during 1935. The small National Socialist movement in Sweden was exposed to a vigorous and continuous attack from the Swedish press and government. The law forbidding the establishment of political organizations of a military character and the wearing of political uniforms or emblems in public was invoked in connection with the arrest of 11 Nazi leaders by the Gothenburg police on February 14. A store of uniforms, weapons, and propaganda leaflets was seized. The press also published evidence tending to prove that the Reich Government was attempting to influence Swedish opinion through subsidized propaganda. Rudolph Hess, Reich Minister without Portfolio, received a cool reception when he spoke before the Swedish-German Society in Stockholm in May. A marked decline in the number of German books purchased by Swedish libraries was reported in the Swedish press. A trade treaty signed by the United States and Sweden on May 25 dealt a further blow to the German export trade to Sweden. Germany's failure to pay commercial debts due in Sweden was another source of irritation.

Dangers to the Scandinavian countries in the rearmament of Germany were discussed at one of the periodical conferences of the Foreign Ministers of Sweden, Denmark, and Norway held at Copenhagen on April 2. Early in December the Premiers of these three States journeyed to Helsinki to confer with Finnish Socialists on plans for united action in case of a war affecting Northern Europe. Military chiefs of the same States had met in the Finnish capital the preceding month. Meanwhile the close ties between Sweden and Denmark had been strengthened by the marriage on May 24 of Princess Ingrid, daughter of the Crown Prince of Sweden, to Crown Prince Frederik of Denmark.

Throughout 1935 economic and financial conditions in Sweden remained highly satisfactory. Industrial production continued at a level above the previous peak in 1929. While exports of lumber were the lowest since 1921, pulp shipments reached the highest level on record. The number of unemployed averaged 81,365 for the year, as against 84,685 in 1934. The 1935 harvest, however, was slightly under normal. There was an active demand for Swedish shipping and railroad carloadings reached the 1929 level. State finances continued in a remarkably healthy condition.

See DENMARK, FINLAND, and NORWAY under *History*.

SWEDISH LITERATURE. See SCANDINAVIAN LITERATURE.

SWIMMING. The really unexpectedly excellent showing made by United States swimmers in the dual meet with Japan at Tokyo in August was the 1935 highlight in water sports. The Americans lost, 36 to 27, to the Japanese, who had spread-eagled the field in the 1932 Olympics, but there were reasons. The two topnotch American backstrokers, Adolph Kiefer and Albert Van de Weghe, were unable to make the trip, and Taylor Drysdale was disqualified for a faulty turn after finishing first in the 200-meters backstroke, and Jimmy Gilhule, relied on for yeoman work in the 200-meter freestyle event and the 800-meter relay, was unable to swim because of an ear infection, and the springboard and platform diving events, Olympic fixtures, were omitted from the meet. Therefore the outcome of the meet was greatly pleasing to the United States swimmers, crushed so badly by the Nipponese three years before. Americans won

three of the six Olympic events on the card at Tokyo—the 100-meter freestyle by Peter Fick, the 400-meters by Jack Medica, and the 100-meters backstroke by Russell Branch.

As usual in the sport there were innumerable records broken. Fick and Medica both set new long-course marks in the meet at Tokyo. Fick set a new 100-meters short course mark of 0:56.6 later in the year and Medica created a new standard of 2:07.9 for 220 yards and Miss Lenore Kight set records of 11:35 for half mile and 24:20.4 for a mile. Mrs. Eleanor Holm Jarrett, the Kompa sisters, Elizabeth and Erna, the Yale University relay four, Jack Kasley of Michigan, and John Higgins of Providence were responsible for other additions to the record book.

The University of Michigan outclassed all opposition to win the N.C.A.A. meet, with 49 points to 15 scored by Yale, second in line. The New York Athletic Club took the men's indoor team title and the outdoor laurels went to the Detroit Athletic Club. The indoor women's honors were captured by the Miami Beach S.A. and the outdoor by the Women's Swimming Association of New York. The New York Athletic Club swept the water polo titles, winning the indoor and outdoor titles at both styles of game, soft-ball (international) and hard-ball (American).

SWITZERLAND. A federated republic of central Europe. Capital, Berne (Bern).

Area and Population. With an area of 15,940 square miles, Switzerland had a population estimated on Jan. 1, 1935, at 4,153,000 (4,066,400 at the 1930 census). Living births in 1934 numbered 67,277; deaths, 46,806; marriages, 32,492. The birth, death, and marriage rates per 1000 of population were 16.2, 11.3, and 7.8, respectively. Permanent populations of the principal cities in 1930 were: Zurich, 249,820 (312,600 in 1933); Basel, 148,063; Geneva, 124,121; Berne, 111,783; Lausanne, 75,915; St. Gallen, 63,947. The German-speaking population in 1930 was 2,924,314; French-speaking, 831,100; Italian, 241,985; and Romansch, 44,204. The same census showed 2,330,336 Protestants, 1,666,317 Roman Catholics, and 17,973 Jews. School enrollment in 1933-34 included 479,622 primary pupils, 48,458 secondary pupils, and 26,723 students in middle schools. Enrollment in the seven universities in the summer session of 1934 was 8503.

Production. About 45 per cent of the working population is engaged in industry, 21 per cent in agriculture, and 15 per cent in commerce. The 1934 crops (in metric tons) were: Wheat, including spelt, 181,700; rye, 31,500; oats, 20,400; potatoes, 780,400; sugar beets, 70,000. The wine production was 780,000 hectoliters. The total 1934 value of agricultural production was 1,227,850,000 francs. Milk accounted for 35 per cent of the total value and cattle for 15 per cent. Some iron, manganese, and hematite is mined. At the beginning of 1934 there were 8210 industrial establishments, employing 314,481 workers. The principal industries are woodworking, machinery, clocks, watches and jewelry, metallurgical production, clothing, cotton and silk textiles, and embroidery. The national income was estimated at less than 7,200,000,000 Swiss francs in 1935, against 7,420,000,000 francs in 1934 and 9,400,000,000 in 1929.

Foreign Trade. Excluding bullion and precious metals, imports in 1934 were valued at 1,434,506,000 Swiss francs (1,594,455,000 in 1933) and exports at 844,332,000 francs (852,785,000 in 1933). Imports from the chief sources of supply in 1934 were

(in 1000 francs): Germany, 388,527; France, 230,363; Italy, 116,048; United Kingdom and Irish Free State, 92,500. The distribution of exports by countries was (in 1000 francs): Germany, 182,493; France, 121,544; United Kingdom, 83,621; and Italy, 76,133. The value of the leading 1934 exports (million francs) was: Watches and parts, 109.1 cotton goods, 105.2; machinery, 93.4; silk goods, 91.6; dyes, 66.0; animal food substances, 42.0.

In 1935 imports totaled 1,283,280,000 francs; exports, 822,000,000 francs. United States imports from Switzerland in 1935 were \$16,272,190 (\$15,208,589 in 1934); exports to Switzerland, \$7,649,030 (\$8,425,454).

Finance. Actual budget receipts in 1934 totaled 453,584,820 francs (409,780,098 in 1933) and actual expenditures were 480,245,888 francs (482,061,122 in 1933). The deficit was 26,661,068 in 1934 and 72,281,024 in 1933. Budget estimates for 1935 were: Receipts, 436,300,000 francs; expenditures, 477,800,000 francs. The public debt on Dec. 31, 1934, totaled 2,265,685,000 francs (consolidated, 1,763,840,000; floating, 501,845,000), exclusive of the Federal railway debt of 3,074,377,000 francs. The Swiss franc (par value, \$0.3267) exchanged at an average of \$0.2471 in 1933 and \$0.3237 in 1934.

Communications. Including tramways and funiculars, Switzerland had 3607 miles of railway line in operation in 1934, of which 2638 miles were electrified. The Federal railways, with 1783 miles of line in operation, carried 114,293,000 passengers and 14,983,000 metric tons of freight in 1934. Total operating receipts were 333,587,000 francs and operating expenditures were 247,572,000 francs. Main automobile highway extended about 10,200 miles. In 1934 the Swiss domestic commercial aeroplanes flew 709,900 miles and carried 29,417 passengers. The Swiss and foreign lines carried 55,126 passengers and 1,656,175 lb. of mail.

Government. The Federal Assembly delegates executive authority to a Federal Council of seven members elected for three years. The chief magistrates are the President of the Confederation and the Vice President of the Council, who are elected by the General Assembly for one year. President in 1935, Rudolf Minger; Vice President, Dr. Albert Meyer.

History. In marked contrast with the methods of neighboring dictatorships, the Swiss people during 1935 decided several crucial issues in accordance with their well-tryed democratic governmental system. They charted their course through growing military, economic, and social perils by means of three referendums and one election. The first referendum, held on February 23, took place upon petition of Socialists, Communists, and others who sought the repeal of the law of September, 1934, extending the period for universal compulsory military training. This law was passed by the Federal Assembly by a vote of 291 to 11, following the reported discovery of German plans for an invasion of France by way of Switzerland in order to avoid the newly completed line of French fortifications along the Franco-German frontier. In the referendum, in which 80 per cent of the voters cast ballots, the measure was sustained by an unexpectedly close vote of 506,845 to 431,902.

Inspired partly by the Rooseveltian New Deal in the United States, the socialist, labor, and farm groups proposed a comprehensive programme for checking the economic depression, which, contrary to the tendency in the depreciated-currency countries, showed no evidence of lifting in Switzerland.

This so-called "crisis initiative" involved abandonment of the gold standard, devaluation of the Swiss franc, state control of industry, commerce, and banking; and state support of workers, aged persons, and others. The alternative, favored by the industrial and banking interests, was the continuance of the government's deflationary policy, with the reduction of wages and prices and the lowering of the standard of living. After being rejected by the National Council on March 28 and by the Council of States on April 5, the "crisis initiative" was submitted to a vote of the people on June 2. It was rejected by a vote of 566,242 to 424,878, with 83 per cent of the electorate voting.

The growing alarm and resentment of the Swiss people at the efforts of Italian Fascists and German Nazis to wean the Italian-speaking and German-speaking Swiss, respectively, away from their attachment to the Swiss republic became manifest during the year. In 1934 the German-speaking northern cantons had registered their hostility to Nazism. In 1935 the suppression by the Federal Council of the Fascist journal *Adula*, published in Italian-Switzerland, was seized upon by Fascist agitators as evidence of the "tyranny" of the German- and French-speaking Swiss over their Italian-speaking compatriots. In protest against this Italian propaganda, the Italian-Swiss held a huge demonstration at Lugano, at which all political parties declared their firm attachment to the Swiss republic.

The loyalty of the Swiss to the democratic republic was strikingly shown in a third referendum held on September 8 when a proposal for total revision of the Federal Constitution was defeated by a vote of 501,000 to 194,678. Defeat of the measure was attributed to fear that constitutional revision would open the door for the introduction of some form of fascism. The proponents of revision were split into many antagonistic groups, including Fascists desirous of limiting parliament's power, radicals who wanted to give labor direct class representation in the parliamentary system, and conservative Catholics who desired an authoritarian state on the Austrian model. Elections for the Council of States and the National Council, held October 27, resulted in radical gains at the expense of the Nationalist (Fascist) party.

Albert Meyer, Minister of Finance and a strong opponent of devaluation of the currency, was elected President for 1936 on Dec. 11, 1935. Giuseppe Motta, four times President of the Confederation, was chosen Vice President. Meyer's selection as President was significant in view of the increasing weakness of the franc and the large-scale hoarding, which was officially reported to have totaled 1,000,000,000 francs during 1935.

Swiss resentment at Nazi propaganda was aggravated by the kidnaping from Basle on March 9 of Berthold Jakob-Salomon, a refugee from Germany, who had written anti-Nazi newspaper articles. The Swiss Government formally protested to Germany on April 2 and held the alleged kidnaper, Dr. Hans Wesemann, as a hostage for Jakob's return. In May Switzerland invoked the German-Swiss arbitration treaty of 1921 to secure satisfaction. The same month the Swiss were again aroused by flights of German air squadrons over their territory. Switzerland's insistence finally led to Jakob-Salomon's return in September.

SYRACUSE UNIVERSITY. A nonsectarian institution of higher learning for men and women in Syracuse, N. Y., founded in 1870. The 1935 autumn enrollment was 5219. The summer session

had an attendance of 1828. The faculty numbered 664. The productive funds amounted to \$4,744,828, while the income for the year was \$1,666,502.37. The library contained 256,135 volumes. Chancellor, Charles Wesley Flint, D.D., LL.D.

SYRIA. A mandated territory of France situated north of Palestine on the Mediterranean coast. Capital, Beirut (Beyrouth).

Area and Population. Syria has an area of about 60,000 square miles, divided administratively as follows: Republic of Syria, including the autonomous Sanjak of Alexandretta, 49,200; Republic of Lebanon, 3600; Latakia, 2800; and Jebel Druze, 2400. The total population on Jan. 1, 1934, was estimated at 3,200,000. According to 1932 estimates, the population was divided as follows: Syria (capital, Damascus), 1,696,638; Lebanon (capital, Beirut), 862,618; Latakia (capital, Latakia), 286,920; Jebel Druze (capital, Es Suweideh), 51,780. Populations of the chief towns were: Damascus, 193,912; Aleppo, 177,313; Beirut, 134,655; Homs, 52,792; Hama, 39,960; Tripoli, 37,260; Antioch, 28,000; Latakia, 21,404. Arabic is the language most widely used. Of the total population, about 1,514,755 were Moslems.

Education. In 1933 there were 691 public schools, with 72,654 pupils; 1095 private schools, with 84,455 pupils; and 631 foreign schools, with 56,897 pupils. The Syrian University at Damascus had 391 students in 1933, the American and French universities at Beirut, 392 and 650 students, respectively.

Production. Agriculture and stock raising are the main occupations. About 2,500,000 acres were under cultivation in 1933. Production of the chief crops in 1934 was (in metric tons): Wheat, 395,700; barley, 242,700; oats, 14,500; corn, 29,300; rice, 900; potatoes, 40,200; tobacco, 3900; cottonseed, 5800; sesame, 2400; olive oil (1934-35), 9600; cotton, 2500; hemp, 600. Wool production in 1934 was 5400 metric tons. The production of raw silk for Syria and Cyprus in 1933 was 116,000 metric tons. Grapes, apricots, and other fruit are widely grown. The wine output of Lebanon in 1933-34 was 12,000 hectoliters. Livestock in 1934 included 1,962,000 sheep, 1,638,000 goats, 280,000 cattle, 160,000 camels, and 78,000 asses. Some iron ore and lignite are mined. Flour, oil, soap, silk thread, wine, and tobacco products are the chief manufactured products.

Foreign Trade. Imports into Syria, including Lebanon, in 1934 were valued at 2,981,760,000 piastres (3,774,960,000 in 1933) and exports totaled 819,480,000 piastres (844,320,000 in 1933). (Five piastres equals one French franc.) The chief sources of 1934 imports were: France, 482,380,300 piastres; Japan, 337,314,100 piastres; United Kingdom, 331,272,000 piastres; and Turkey, 240,877,000 piastres. United States statistics for 1935 showed imports from Syria of \$1,826,983 (\$1,142,541 in 1934) and exports to Syria of \$2,373,483 (\$2,235,341 in 1934).

Finance. Budget estimates for 1935 anticipated receipts and expenditures balancing at 13,821,617 Syrian pounds (1 Syrian pound equals 100 piastres or 20 French francs), as against actual receipts of 12,650,604 pounds and expenditures of 11,840,827 pounds in 1934. There was no public debt.

Communications. Syria in 1935 had 584 miles of railway lines, 6553 miles of highways, and air lines connecting Damascus with Bagdad and Beirut with Marseille. Motor bus routes linked Damascus and Bagdad, Beirut and Haifa, and Aleppo and Mosul. Extension of the northern Syrian rail-

way to the Iraq frontier was completed in 1935, as was the equipment of the telephone system with new wiring and semi-automatic apparatus. The French Army operated the telephone system. In 1933, 1723 vessels of 3,623,605 tons entered the ports, Beirut being the chief port of call. A five-year harbor improvement programme was under way at Beirut in 1935.

Government. By the Constitution of May 14, 1930, the Syrian Republic received powers equivalent to those of an independent state, except that the control of foreign relations and certain other functions were retained by France as the mandatory power. President in 1935, Mohamed Ali Bek el Abed, elected for five years on June 11, 1932. The Constitution of the Lebanese Republic was suspended in May, 1932, and the President was given dictatorial powers by the French High Commissioner. President in 1935, Habib Pasha es Saad. There was an appointive advisory council. Latakia and Jebel Druze were administered by French governors, assisted by partly nominated and partly elected councils. A French and colonial army of 316 officers and 13,655 men of other ranks was in occupation of the country. French High Commissioner in 1935, Count Henri de Martel.

History. A slight improvement in the badly depressed economic situation in Syria took place during 1935, despite the adverse influence of the Italo-Ethiopian conflict and the fluctuations of the French franc, upon which the Syrian currency was based. The economic upturn was too slight, however, to check the growing Nationalist agitation, which had harassed the French High Commissioner for a number of years. The movement had its roots partly in the desire for political independence and partly in the economic discriminations imposed upon the Syrian merchants and populace in general by the French administration. In 1935 the political movement gained strength as a result of the success achieved by the Egyptian Nationalists through a policy of violence (see *EGYPT* under *History*). New economic grievances also arose to stir Nationalist feeling. The French authorities were charged with exiling without a hearing Fakkri Bey el Baroudi, a Syrian leader who organized a boycott against the Belgian-owned electric power company which held the street-car and power concession for Damascus. The boycott was designed to force a reduction in allegedly exorbitant light rates and railway fares. It was also charged that the French maintained high tariffs on all imports except those from France and that they discouraged local industries which competed with French products.

On Nov. 22, 1935, the French attempted to break up a newly organized Nationalist party by arresting its leader, Antoun Saadeh, and 39 other prominent members on the charge that they had failed to register their party in accordance with the law. It was reported that the movement was secret and that it had a distinctly Fascist character. Its leaders were accused of planning to overthrow the French and British mandatory régimes in Syria and Palestine, respectively, and establish a united Syrian state to include the Syrian and Lebanese republics and Palestine. In January the authorities had taken similar drastic action to crush an alleged Communist movement. A number of radical newspapers published in Europe were banned and various radical meeting places were raided and closed. Instead of overawing the populace these forceful measures increased the prevailing unrest. The Nationalist agitation at the close of 1935 was assum-

ing menacing proportions in Damascus and the other principal cities.

For the settlement of Assyrians expelled from Iraq on the Ghat Plain of Syria, see *IRAQ* under *History*.

TAHITI. See *OCEANIA, FRENCH ESTABLISHMENTS IN*.

TAIWAN. See *FORMOSA*.

TAJIK S.S.R. See *SOVIET CENTRAL ASIA*.

TANGANYIKA, tãng'gân-yè'kã, **TERRITORY.** The Territory in East Africa, mandated to Great Britain by the League of Nations. Area, 363,600 sq. miles; population (1931 census), 5,063,544 including 32,687 Asiatics and 8217 Europeans. Dar-es-Salaam, the capital, had 33,147 inhabitants.

Production and Trade. Sisal, cotton, groundnuts, hides, skins, coffee, copra, simsim, ghee, diamonds, gold, and timber (pencil cedar, yellow wood, mvule, ebony) were the main products. In 1935, imports were valued at £2,989,600 (£2,343,185 in 1934); exports, £3,445,143 (£2,645,283 in 1934) including sisal, £1,134,732; cotton, £569,547; coffee, £486,842; gold, £369,742; groundnuts, £210,018; hides, £131,265.

Government. Budget estimates (1935): revenue, £1,728,000; expenditure, £1,722,000. For 1936, revenue was estimated at £1,903,172 and expenditure at £1,860,651. Late in 1935, due to the improvement in railway earnings, it was anticipated that the Territory would end the year with a surplus of £150,000. The Territory was administered by a governor aided by an executive council of 6 members, and a legislative council of 23 members. Governor, Sir Harold MacMichael. See *KENYA* under *History*.

TANGIER. An internationally administered area in northwestern Morocco, near the Strait of Gibraltar. Area, about 225 square miles; population, about 51,000 (35,000 native Moslems, 11,000 Europeans, and 5000 Jews). Of the total population, about 45,000 live in the port city of Tangier. Commerce, agriculture, fishing, and the manufacture of cigarettes are the chief occupations. Wheat, barley, and chickpeas are the leading crops. Imports in 1933 totaled 68,795,047 French francs; exports, 9,306,987 francs. A railway linked Tangier with Fez, in French Morocco. Air lines extended from Tangier to Casablanca, Rabat, and Toulouse. There were about 65 miles of highways. In 1933 a total of 1786 ships of 2,922,912 tons entered the port of Tangier.

Tangier is permanently neutralized and demilitarized by the Convention of Dec. 18, 1923, as modified by the protocols of July 25, 1928, and November, 1935. For local government there is an international Assembly of 27 members, whose acts are subject to the veto of a Committee of Control composed of the French, British, Spanish, and Italian consuls in Tangier. Native affairs are in the hands of a Mendoub, representing the Sultan of Morocco. Administrator in 1935, M. Le Fur; Mendoub, Si Mehemed Et-Tazi.

History. Following British and Spanish demands for reforms in the administration of Tangier, a new agreement for the extension of the Tangier Statute to 1948, with certain modifications, was reached at Paris in the middle of November, 1935. The British had demanded a thorough-going reform of the judicial system and a reduction of Tangier's share of the charges on the French Moroccan loans of 1904 and 1910 and on the Tangier-Fez Railway loans. They pointed out that Tangier had run an annual budget deficit of about 3,000,000 francs, due to the heavy burden of the loan charg-

es. Spain also objected to France's predominant position in the Tangier administration and the high cost of the government. Under the new arrangement, the chief administrator of the zone was to be a Spaniard until May 14, 1948. Spain also was granted the right to appoint one director of the customs service, control of religious worship, and an additional member in the Legislative Assembly.

TARIFFS. See ARGENTINA, AUSTRALIA, BELGIUM, BRAZIL, CANADA, COLOMBIA, CUBA, FRANCE, GERMANY, GREAT BRITAIN, HONDURAS, IRISH FREE STATE, ITALY, JAPAN, NETHERLANDS, THE, NEW ZEALAND, NORWAY, PANAMA, POLAND, and SPAIN under *History*.

TASMANIA. A State of Australia. Area, 26,215; population (Mar. 31, 1935) 229,712. During 1934 there were 4470 births, 2345 deaths, and 1678 marriages. Chief towns (with June 30, 1933, census populations): Hobart, 60,408; Launceston, 32,841; Devonport, 5153.

Production. Wheat, oats, pease, fruits, potatoes, hops, and hay were the main agricultural products. Livestock in the State (1934): 2,035,052 sheep, 262,256 cattle, 30,299 horses, 38,126 pigs. Production (1934): Wool, 14,200,000 lb.; butter, 9,003,800 lb.; cheese, 1,551,000 lb.; bacon and ham, 1,951,651 lb.; wheat (1934-35), 316,000 bu. Mineral production (1934) was valued at £749,969 of which copper accounted for £267,342; tin, £219,246; coal, £81,262; gold, £48,139; silver and lead, £43,850. The value of production (1933-34) from the 899 factories, with 9782 employees, was £3,049,851 (Australian £ averaged \$4.0095 for 1934).

Government. For the year ended June 30, 1935, revenue amounted to £2,872,148; expenditure, £2,991,259; public debt, £2,835,354. Executive power was vested in a governor. Legislative power rested with a parliament consisting of a legislative council of 18 members elected for 6 years and a house of assembly of 30 members elected for 3 years. In the 1934 election the political parties in the House of Assembly comprised 15 Labor, 13 Nationalist, and 2 Independent. Governor in 1935, Sir Ernest Clark; Premier, A. G. Ogilvie. See AUSTRALIA.

TAXATION. Further additions to taxation both State and Federal had not been expected at the opening of the year 1935 and, indeed, Federal politicians had expressly declared that no further action for the installation of new taxes was contemplated. Both in State and in Federal finance, however, the year was productive of surprising increases in the severity and inclusiveness of taxation with the result that the close of the twelve-month found the general character of the load increased to a point close to that of the World War—in some respects greater than that produced by the war and later removed during the years directly subsequent to the struggle. At another point (See PUBLIC FINANCE, pp. 614-620) the factors which combined to bring about the result just referred to have been sketched. At this point it is sought merely to review the net outcome of the period so far as it affects changes in the tax system. See INTERNATIONAL LAW; AGRICULTURE.

Federal Taxation. The Federal administration had apparently not intended to suggest great changes in the revenue system and nothing of the sort was debated or planned in Congress until about midsummer when the President unexpectedly demanded the instant adoption of a tax measure designed to take away the larger incomes and inheritances above a substantial figure. This proposal was at once rejected on the ground that the

time allotted was too short. Eventually discussion resulted in agreement greatly to lengthen the session and to consider the subject in detail during the remaining summer months. Eventually there was enacted a measure approximating the form of law for which the President had asked (Aug. 19, 1935). The chief provisions of the act, so far as taxation itself was concerned, included (1) the imposition of a tax varying from present levels on the lower rates to practical confiscation on the higher incomes above \$10,000,000, with very greatly increased rates between the levels of \$1,000,000 and \$10,000,000. Inheritance taxation, in the same way, was enormously enlarged so far as related to incomes ranging from \$1,000,000 to \$10,000,000; while substantial advance of burden was made on all incomes through the adoption of new legislation which would compel the collection of very greatly increased totals. This new legislation, however, was not to become effective, so far as rates were concerned, until the 1st of January, 1936. So far as reports to the government are concerned it will not make itself felt through the change in administrative control until the first returns of 1936, to be filed on March 15. So far as actual payments on the higher incomes are concerned, the taxpayer will first actually feel it in the returns of Mar. 15, 1937.

The revenue yield of the year 1935 was thus a yield controlled by substantially the same conditions which were effective in the returns of Mar. 15, 1935. According to the Secretary of the Treasury, the effect of the legislation which controlled the returns of that year, was to bring about a very material enlargement of tax collections. The daily statements regularly published by the Treasury showed an aggregate of income tax receipts of \$554,814,928 on Dec. 31, 1935, as against \$420,550,247 a year previous. The report of the Commissioner of Internal Revenue for the year ending June 30, 1935 (fiscal year), which thus included the first half of the calendar year 1935, showed aggregate income taxes of \$1,099,230,000 as against \$817,425,000 for the preceding year; while miscellaneous internal revenue for the fiscal year 1935 was \$1,673,982,831 as against \$1,483,790,000 for the preceding year. These enlargements, however, were obtained at great cost in inconvenience and suffering on the part of the people—so much so that even the Congress of 1934-35 showed great reluctance and eventually practically refused to adopt a higher schedule of rates running down to the smaller incomes, which were proposed as a substitute for the emergency tax plan demanded by the President, as already outlined.

According to the U.S. Secretary of the Treasury in his annual report:

Income taxes. In the fiscal year 1935 income tax receipts aggregated \$1,099,100,000 as compared with \$818,000,000 in the fiscal year 1934, an increase of \$281,100,000. Receipts during the first half of the fiscal year 1935 were based largely on incomes for the calendar year 1933, and receipts during the second half, on incomes reported for the calendar year 1934. Receipts during the second half, therefore, reflected the higher levels of corporate and individual incomes during the calendar year 1934 as compared with 1933, as well as the changed provisions contained in the Revenue Act of 1934, which then became effective for the first time.

Collections of current corporation income taxes increased \$144,000,000 in 1935 over the preceding year, about 62 per cent of this increase occurring in the second half of the fiscal year. Among the changed provisions in the Revenue Act of 1934 affecting corporation income tax collections were the elimination of consolidated returns (except for railroad corporations), the imposition of a surtax on personal holding companies, and new provisions with regard to reorganizations. In addition, the Treasury changed its administration of depreciation allowances. The last-named

factor, together with the special efforts of the Bureau of Internal Revenue to collect back taxes on incomes, resulted in an increase of collections of \$45,000,000 during the fiscal year 1935.

Approximately 79 per cent of the increase of \$93,200,000 in current individual income taxes during the fiscal year 1935 was collected during the second half of the fiscal year and reflected, in addition to the higher level of individual incomes in 1934 as compared with 1933, the net effect of changes in the rate structure and in the capital gains and losses provisions incorporated in the Revenue Act of 1934.

Income Tax. Among the States, the important development of the year was, as in former periods, the rapid growth and extension of the income tax. Personal income taxes were enacted in California, Pennsylvania, South Dakota, West Virginia, and Washington, in addition to those already possessing that type of impost. An income tax law was also passed by the Colorado legislature, but it was vetoed by the governor. In North Carolina the existing constitutional income tax rate had been 6 per cent but in November the people voted to raise it to 10 per cent. In the new laws the rates proposed range from 1 per cent on the first \$5000 of income to 15 per cent on all over \$250,000. There was a marked tendency to increase rates and to lower exemptions in the States which already had an income tax on their statute books. Such increases were made in Alabama, Delaware, Idaho, Louisiana, Massachusetts, New York (through the retention of the "emergency" tax), North Dakota (through a revision of the brackets), and in other States alterations in exemptions which will result in making the burden materially larger.

The Sales Tax. Sales taxes have rivaled in popularity the demand for income taxes. In six States—Idaho, Maryland, Arkansas, New Jersey, North Dakota, and Wyoming—sales taxes were enacted, thus the total number with sales taxes was raised to 23. Some other States enlarged and amplified their preceding sales tax systems and in not a few gross income taxes were given up in favor of personal income taxes supplemented by retail sales taxes. Modifications broadening the sales tax system were enacted in Arizona, Mississippi, Missouri, New Mexico, North Carolina, and Oklahoma. Sales tax rates tended to become more uniform, being ordinarily 1 or 2 per cent flat. The retail sales, including amusements, although with some exemptions such as the sales of food and the like, have mitigated or limited the burden involved in the collection of this type of tax. Public utility services were usually exempt but they were now to be included as subject to sales taxes in Arizona, Arkansas, Colorado, Idaho, Missouri, New Mexico, North Dakota, Oklahoma, South Dakota, and Wyoming. "Relief" was still the major object for which sales taxes were collected, but this was by no means the exclusive pretext for the imposition of the impost. The popularity of the sales tax was unquestionably increasing and according to some able commentators it was probable that sales taxes, with the start they had now obtained, would remain as permanent features of the tax systems of the States in which they existed.

Chain Store Taxes. Chain store taxes have, likewise, grown in breadth of application and popularity. In 1935, California, Iowa, and South Dakota joined the group of 24 States which taxed chain stores. Two main types of taxation may be noted—the one a graduated tax varying with the store net receipts or with a number of stores, and the other a graduated tax varying with the volume of business. Rates varied to a considerable extent; the lowest rate in the country was that in South Dakota which had a license chain store tax rang-

ing from \$1 on the first store to \$10 on the tenth and each store over 10. Rates of chain store taxes were obviously increasing. Gross receipts sales taxes were usually $\frac{1}{2}$ of 1 per cent on receipts from one store, 1 per cent on those from 2 to 3 stores, and so on until a maximum rate of 5 per cent on gross receipts of each store was reached, if the chain included 16 or more stores. Other taxes designed to impede the development of the chain store business were, likewise, frequent.

Gasoline and Motor Taxes. Constant increase in gasoline tax rates was a feature of the past year. Alabama's 6 cent tax rate was made permanent. Delaware increased its rate to 4 from 3 cents, Nebraska to 5 from 4 cents, New York to 4 from 3 cents, Pennsylvania raised its rate to 4 from 3 cents, and Massachusetts extended its 3 cents tax until April 13, 1936; proceeds of the taxes instead of being used exclusively for the highways as formerly, were devoted, more and more, to "relief." Dealer taxes in the shape of bonds oftentimes as high as \$25,000, became more and more customary.

Tax Commissions. The feeling that all was not well with the tax situation and that the burden of taxes was growing more and more oppressive was evident in the changes that have taken place with regard to the supervision of taxation. In Alabama a State Tax Commission of three members was provided for, while New Mexico has created a Bureau of Revenue. Louisiana established a State Tax Board, and in Minnesota a special committee was named to study the present tax system and make recommendations for a better one. The Tax Revision Commission of New York State was continued for another year, and the Tax Survey Commission of North Dakota was directed to make a survey of the tax structure of the State which will more equitably distribute the burden. In a number of States important reports upon taxation were filed, although no important measures growing out of them were adopted. Included in such States were California, Connecticut, Florida, Iowa, Louisiana, Maine, North Carolina, Virginia, Wisconsin, and Wyoming; while special studies were made in a considerable number of the larger municipalities.

Liquor Taxes. Liquor legislation, during 1935, was extensive and conflicting. In two States—Alabama and Georgia—"dry" régimes were reinstalled. Control Boards were set up in Arkansas, Florida, Idaho, Nebraska, South Carolina, South Dakota, Utah, West Virginia, and Wyoming. In the latter State a liquor commission composed of the governor, secretary of state, and state treasurer was authorized to buy liquor at wholesale and dispense it to the public under specified conditions. Along with the liquor taxes and regulations of the past year have also gone taxes on racing, which became distinctly popular and proved a lucrative source of revenue.

Trends and Objects. On the whole, the experience of the year 1935 under State taxation was not very reassuring, either as to self-consistency or reasonableness. The search for new objects of taxation and the effort to raise rates to the point of maximum yield continued; but the inconsistencies and double taxation which had been characteristic of State systems in the past have hardly been reduced, while the efforts to find a new basis for taxation in various States have, in some cases, had the result merely of "crossing wires" and bringing about conflicts of policy with legislation already on the books.

See the articles on the respective States, under *Legislation*.

TAXONOMY. See BOTANY.

TELEGRAPHY. A new low flat rate for telegrams on holidays was introduced and attracted much new business. Facsimile sending by telegraph was perfected and introduced commercially. It is accomplished by a slightly different method than that used by the telephone service in that photographic recording and developing are not used. A new portable carrier-current system may be attached to any telegraph station in 10 minutes and provides an extra two-way circuit at points where it is expected that there will be an emergency demand for service. A non-portable eight-channel two-way carrier-current system may be added to any existing circuit so that 24 additional messages may be sent simultaneously over one pair of wires. By an intimate connection of land wires and ocean cables direct cable service is now available between London and Washington. This was inaugurated on May 1st with ceremonies in the Department of State. At the time of the Jubilee of King George there was direct communication between a news bureau in London and news bureaus in several American cities. The telegraph typewriter increased in popularity and is rapidly displacing the key and sounder. The New York stock market became so active that the ticker fell so far behind as to cause complaints from customers. Steps are being taken to increase its speed still further in spite of the fact that the ticker system was completely rebuilt a few years ago. The Western Union Company reported a business of about \$100,000,000 per year with a plant which is capable of doing a business of \$200,000,000 per year. This includes 1,865,000 miles of land wire and 30,784 nautical miles of ocean cable, 21,000 telegraph offices, and 15,500 telegraph agencies.

TELEPHONY. More than 450,000 telephones were added to the American system in 1935. Overseas services were further expanded by the addition of Iceland and the Dominican Republic to the foreign areas that may be reached by telephone. Ship-to-shore service was augmented by the inclusion of the steamships *Normandie* and *Transylvania* to the vessels equipped with apparatus for telephonic communication with land systems. At the end of the year approximately 93 per cent of the 34,500,000 telephones in the world could be reached from any telephone in the Bell System.

Coaxial Cable. Progress in the Bell Telephone Laboratories in the development of the coaxial cable reached a point during the year where it was deemed advisable to initiate an actual installation in the field in order to obtain experience with such practical problems as can not be explored in the laboratory.

In the trial installation proposed, a lead sheath cable of $\frac{3}{8}$ -inch diameter will be employed. This cable contains two coaxial circuits, one for either direction or transmission. Each coaxial circuit consists of an outer copper conductor in the form of a tape stranded tube, within which a copper wire is supported by a series of rubber disk insulators, the intervening space being filled with air or nitrogen gas. Besides acting as a conductor, the outer tube serves to shield the transmission path from undesirable external electrical influences. In such a cable the repeaters, which are under development, will be placed approximately 10 miles apart. At each repeater point, only a single repeater is necessary, this being capable of amplifying an entire group of 200 or more telephone channels.

Marine Radiotelephone Service. There has been a growing interest in a service for small coastal and harbor craft, such as fishing vessels, merchant craft, tugboats, coastal passenger ships, etc. Service of this kind in connection with the Boston fishing industry was opened for commercial use in 1934. Additional development in 1935 solved the problem of providing suitable radio compass equipment to fishing fleet owners, and other improvements have been made such, for example, as a selective signaling device such that the bell on each vessel is operated only in response to the particular code impulses to which its selector is adjusted. The fishing craft make use of the service normally for reporting details of the catch, for making arrangements to return to port, and in talking to other fishing vessels.

Switching System, New Type of. Announcement was made during the year of the development of a new automatic central office switching system for which engineering and manufacturing are in progress for trial installations. This new system will operate satisfactorily with existing switchboards of all types. It is expected to be applicable to use in large cities and, in addition, the flexibility and rugged construction of the new apparatus suggests its possible use also for other applications such, for example, as in central offices in small communities and in small private branch exchanges.

Telephone Call Around the World. In April, 1935, there was a demonstration of two-way telephone conversation entirely around the world, which employed the longest telephone circuit ever established. The call was routed from New York through San Francisco, Java, Amsterdam, London, and back to New York, the total length of the combined wire and radio telephone channels being more than 23,000 miles. The voice impulses covered this distance in a fraction of a second. This achievement was made possible by the cooperation of a number of telephone companies and administrations.

Telephone Set, New. Announcement was also made early in the year of a new telephone set, in the base of which are included the bell and other equipment hitherto mounted in a separate apparatus box, which is undergoing service trial. This new arrangement is the result of work of the Bell Telephone Laboratories which has made it possible to reduce the size and increase the efficiency of the different pieces of apparatus. The new design is expected to simplify installation and to improve the appearance and arrangement at the subscriber's telephone.

Telephotography. During the first part of the year, a nationwide telephotographic service was initiated employing a new system developed for use over the telephone wire network. This system transmits pictures of any size up to 11 x 17 inches with a structure of 100 lines per inch and at the speed of 11 sq. in. per minute. This speed of transmission is considerably faster than has been obtained heretofore from telephone circuits. The general method employed in picture transmission consists of analyzing or scanning in successive elements an area containing the graphic information and converting such information into some characteristic of an electrical current as a function of time. The resulting current is then transmitted to a receiving equipment where a process inverse to that employed for sending is used to reproduce the information in substantially the original form. In the network referred to provisions have been made whereby any one of a number of stations can send to or receive from the others on a broadcast basis.

Teletypewriter Exchange Service. In the nationwide teletypewriter exchange service, comprising about 150 central offices and several thousand stations and which grew from 5700 to over 7500 stations during the year, each of the largest offices has been equipped with a 3600-line multiple type switchboard which was designed specifically for the service. The remaining offices, which are too small to economically justify this large board had, prior to 1935, been using modified private wire telegraph switching arrangements. During 1935 a new 1200-line multiple type switchboard was made available and installed in several of these smaller centres. As the service improvements resulting from the use of this board are considerable, it is planned to apply it in all medium-sized and some of the smaller offices.

The increase of Teletypewriter Exchange Service during the year necessitated the assignment of about 100,000 more miles of telegraph facilities to this service, making a total of about 500,000 miles.

TELEVISION. There has been very little public demonstration or discussion of television in the United States during the year 1935. The RCA has appropriated one million dollars for research and a new transmitter has been installed on the Empire State Building. This company is using the cathode ray tube. Another inventor is working on the type using the electron beam focusing scheme which is designed to give 24 frames per second with 240 lines to the frame and project a picture on a disk up to 14 inches in diameter. Two large radio manufacturers are said to have taken out licenses under these patents. The mechanical system is still being advocated by one inventor who uses the Kerr Cell and revolving mirrors. Prof. J. T. Webb of the University of Minnesota announced that he would have a system in operation in 1936.

In Europe progress has been more definite and practical. The German government has one stationary and one portable station in operation and has engineers out making radio field surveys for 20 other stations to cover the centres of dense population. Germany is using 20 to 25 kilowatt short wave stations sending 24 frames per second with 180 lines per frame at present but is committed to 270 lines in the future. Orders have been placed with two large manufacturers for both the transmitter and the receiving sets. Germany has also a truck which seeks out news and action scenes, takes moving pictures and after developing the film sends out the pictures by short wave television within a few minutes. A major station picks up the transmission and re-broadcasts it.

France has been doing some experimental television broadcasting from the Eiffel Tower. In England the government has selected Alexandria Palace as the first transmitting station to cover the London district and is planning other stations. Two transmitters have been ordered, one Baird and one Marconi. Ultra short waves will be used. It is stated that receivers showing an 8 inch by 6 inch picture may be purchased for \$250.

Interesting by-products of the researches in television are the electron microscope and the electron telescope which use the cathode ray tube to receive, transmit, and enlarge pictures made by a lens. The magnitude of enlargement is said to be very great.

TEMPLE UNIVERSITY. A coeducational institution of higher learning in Philadelphia, Pa., founded in 1884. The 1935 autumn enrollment was 5702 in the three colleges of liberal arts, education, and commerce and 2133 in the eight professional

schools of chiropody, dentistry, law, medicine, oral hygiene, pharmacy, theology, and music. The 1935 summer session had an attendance of 1148. There were 738 faculty members. The income for the year ending June 30, 1935, totaled \$1,799,863. The library contained 112,784 volumes. President, Charles E. Beury, LL.D.

TENNESSEE. Population. On Apr. 1, 1930 (Fifteenth Census), 2,616,556; July 1, 1934 (latest Federal estimate), 2,676,000; 1920 (Census), 2,337,885. Memphis (1930) had 253,143 inhabitants; Nashville, the capital, 153,866.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	2,588,000	51,760,000	\$38,820,000
	1934	2,641,000	58,894,000	47,115,000
Cotton	1935	729,000	320,000 ^a	17,424,000
	1934	744,000	404,000 ^a	24,360,000
Hay (tame)	1935	1,164,000	1,149,000 ^b	11,260,000
	1934	1,226,000	1,089,000 ^b	14,593,000
Tobacco	1935	105,300	88,024,000 ^c	11,912,000
	1934	112,600	94,145,000 ^c	11,957,000
Sweet potatoes .	1935	59,000	4,720,000	2,596,000
	1934	60,000	6,180,000	4,079,000
Potatoes	1935	57,000	4,446,000	2,890,000
	1934	60,000	4,320,000	3,586,000
Wheat	1935	371,000	3,636,000	3,236,000
	1934	323,000	3,392,000	3,324,000

^a Bales. ^b Tons. ^c Pounds.

Mineral Production. The mining of coal increased again, to the yearly total of some 4,110,000 net tons (1935), from 4,135,790 (1934). The quantity for 1934 was still 25 per cent short of that for 1929; but this proportionate deficiency was less than the corresponding figure of 33 per cent for the Union as a whole. Most of the small production of iron ore was interrupted in 1934, to the contrary of the tendency in the main iron-mining States. Coke, however, was produced in the quantity of 76,591 net tons (1934), almost as great a total as for the year before. There continued a minor production of pig iron. The mining of zinc ores increased in the area formed chiefly by eastern Tennessee but including also part of Virginia; the zinc in the ore mined in 1934 rose to 47,712 short tons, from a total of 32,770 tons for 1933.

There occurred an increase in the mining of phosphate rock; the yearly quantity sold or used by producers rose to 425,952 long tons, including some contribution from Virginia, for 1934, from a corresponding 333,946 tons for 1933; the total by value rose to \$1,815,678, from \$1,373,392. The Tennessee Valley Authority made important commitments in 1934 with a view to developing the production of phosphate in the State; it more than doubled its leaseholds of lands bearing phosphate rock, to a total of 99 leases, covering a reported 15,980 acres by the end of the year, it also converted some of its electric furnaces in Nitrate Plant No. 2, at Muscle Shoals, into furnaces for reducing phosphate rock.

Education. For the academic year 1934-35, the number of those enrolled as pupils in the public schools of the State was reported as 640,037. Of these, 548,504 were in common schools or elementary grades, and the remaining 91,533 were in high schools. The expenditures of the year, for education in the public elementary and secondary schools throughout the State, totaled \$20,257,389. The salaries of teachers averaged, for the year, \$589.15 in the elementary positions and \$954.59 in the high schools.

Legislation. The regular session of the Legislature voted to authorize an issue of \$1,500,000 of

State bonds in order to furnish money with which to pay the State's part of the cost of support for its destitute unemployed. It passed statutes regulating the use of land; one of these created a system of zoning—giving authoritative classification to land with regard to the nature of its use. An effort to repeal the law against the teaching of the biological doctrine of evolution (which had been made an issue in the Scopes case in 1925) was defeated. The Legislature ended the tax-exemption of such property of churches, schools, and charitable and fraternal bodies as was used in competition with private business.

The Legislature met again in August to deal with old-age pensions, proposed taxation, and other matters.

Political and Other Events. The cost of public support for the needy unemployed ran well below the average per capita for the South as a whole. The \$13,340,384 paid out in Tennessee for this purpose in 1934—over 95 per cent of it by the Federal Government—came to some \$5 a head of the population, as against a corresponding rate of \$12, approximately, for the whole nation. The public works of the TVA within the State helped to keep unemployment down in 1935, as in 1934.

While the physical work of the TVA continued on a great scale, the question of its economic and social relations came more and more to the front. Chattanooga followed the example of Knoxville and Memphis in moving to change from private companies' service to the use of the TVA's electricity. In an election held on March 12 the voters of Chattanooga adopted a plan, urged by the Public Power League, for the issue of \$8,000,000 of municipal bonds with which to pay for a municipal system for the distribution of the TVA's current. The local act to which this vote gave effect set up a commission of four \$500-a-year laymen appointees and a lawyer to carry out the plan. The apparent expectation was that the local facilities of the Tennessee Electric Power Company could be bought for the city at an attractive price. That company, however, displayed no alacrity to sell its property and began lowering its rates to levels likely to reduce the chance of the industrial customers' patronizing a municipal system.

Work on the Norris Dam proceeded, encouraging expectation that it would reach completion in May, 1936, and that electricity could be delivered from that source to Chattanooga and other communities soon thereafter. At Knoxville, on May 17, was held a great and enthusiastic celebration of the second "birthday" of the TVA, which served as a demonstration of endorsement from many parts of the State. Soon afterward, however, sentiment was affected by the proceedings before the House of Representatives' committee on military affairs; the audit, there presented, of the Federal Comptroller-General, indicating that the TVA had valued at \$51,000,000 properties on which \$132,792,000 had been spent and had reported expenditures of some \$12,000,000 as against \$1,345,000 of receipts, drew attention; while testimony that the TVA had bought small plots in order to interfere with projected hydroelectric developments of the Aluminum Company of America roused fears that the TVA, while ostensibly attracting industries to the State, might actually drive that particular industry out of it.

While the subject of the TVA thus led to controversy among some elements in the State, the prevailing feeling continued to reflect a realization that the Federal Government was spending many

millions in Tennessee and likely to spend more on new dams and plans for promoting industries and use of lands.

Joseph I. Reece, former Commissioner of Insurance and Banking, who had been ousted from office some time before, was convicted of having stolen \$90,000 of bonds held by the Insurance Department and was sent to the State Penitentiary on July 6. See FLOODS.

Officers. The chief officers of the State, serving in 1935, were: Governor, Hill McAlister; Treasurer, James J. Bean; Comptroller, Roy C. Wallace; Secretary of State, Ernest N. Haston; Auditor, Lyon Childress; Attorney-General, Roy H. Beeler; Commissioner of Education, Walter D. Cocking.

Judiciary. Supreme Court: Chief Justice, Gratton Green; Associate Justices, A. W. Chambliss, Colin P. McKinney, W. H. Swiggart, William L. Cook.

TENNESSEE, UNIVERSITY OF. A State institution of higher education, nonsectarian and coeducational, in Knoxville, with colleges of medicine and dentistry and schools of pharmacy and nursing in Memphis and a junior college in Martin, founded in 1794. The total enrollment for 1934-35 was 3637 of whom 1315 were registered in the summer session. The faculty numbered 161. The endowment funds amounted to \$457,768; the income for the year 1934-35 was \$1,693,873. The library contained 156,266 volumes. There was under construction in Knoxville an administration building and a building for the department of biology, in Martin a dining hall, and a student activities building in Memphis. President, James D. Hoskins, LL.D.

TENNESSEE VALLEY AUTHORITY (TVA). See DAMS; MUNICIPAL OWNERSHIP; TENNESSEE; UNITED STATES.

TENNIS. A pair of lawn tennis matches, among the most sensational ever played in the game, overshadowed all else in the sport in 1935. The first was on Wimbledon's famous court where Mrs. Helen Wills Moody, back in competition after a two-year absence, staged a great rally to turn back Miss Helen Jacobs after trailing 2-5 in the third set and was within a single stroke of defeat. The other sensation was staged at Forest Hills, L. I., where Frederick Perry, England's great player who had earlier in the year helped his country to retain the Davis Cup, yielded his national singles crown to Wilmer Allison in the outstanding upset of the campaign.

Mrs. Moody's triumph over the rival who had been leading her in 1933 when an injured back caused her default, was as hard won as any in her long career. After a quick decision to reenter competition, Mrs. Moody took a hurried trip from her home in California to England. She played in the Queens Club tournament and was beaten in the final by Miss Kay Stammers, pretty English girl. Then she and Miss Jacobs worked their respective paths to the Wimbledon final and the eyes of the sports world were upon them. Mrs. Moody won the first set but Miss Jacobs was strong in the second, and from 2-all in the third rushed into a 5-2 lead. Then began one of the great rallies of the game, which ended only when Mrs. Moody had captured the Wimbledon title for the seventh time, equaling the record of Mrs. Lambert Chambers. Miss Jacobs returned home to lead the United States to Wightman Cup victory over England and then to capture her fourth national singles crown in a tournament not entered by Mrs. Moody.

Perry's loss to Allison, the veteran campaigner,

was surprising to say the least, and took place in the semi-final of the tournament after the Briton, who had retained his Wimbledon title in June, had swept through the early rounds with a show of skill considered unmatchable by any other player in the tournament. Allison played beautifully against Perry and after the defending champion had fallen heavily and twisted his knee in the first set, Allison forged ahead and eliminated the champion in three straight sets and the following day crushed Sidney B. Wood in the final to gain his first major singles crown in a career of distinguished achievements and heart-breaking frustrations. Allison's victory over Perry, who had beaten him two months before in Davis Cup play and in the national final in 1934, and over Wood constituted one of the most amazing comebacks in the sport's annals.

Despite the defeat at Allison's racquet, Perry, winner of the British and French championships, in each of which he downed Jack Crawford in the semi-final and Baron Gottfried von Cramm of Germany in the final; runner-up to Crawford in the Australian championship and victor over Allison and Donald Budge in the challenge round of the Davis Cup, remains the outstanding amateur singles player of the world.

Allison and John Van Ryn won the national doubles crown and the women's honors went to Miss Jacobs and Mrs. Sarah Palfrey Fabyan. Mrs. Fabyan and Enrique Maier of Spain were best in the mixed doubles. Jack Crawford and Adrian Quist, the Australian pair, won the doubles at Wimbledon, where the women's doubles went to Miss Stammers and Mrs. Freda James of England. Gregory Mangin won the national indoor title for the second consecutive year, and teamed with Berkeley Bell to take the doubles championship. Miss Jane Sharp, Pasadena, Calif., girl, won the women's indoor laurels and Mrs. Dorothy Andrus and Mme. Sylvia Henrotin of France won the doubles. Miss Sharp and Mangin took the mixed doubles.

TESCHEN. See CZECHOSLOVAKIA and POLAND under *History*.

TEXAS. Population. On Apr. 1, 1930 (Fifteenth Census), 5,824,715; July 1, 1934 (latest Federal estimate), 6,073,000; 1920 (Census), 4,663,228. Houston had (1930) 292,352 inhabitants; Dallas, 260,475; San Antonio, 231,542; Fort Worth, 163,447; Austin, the capital, 53,120.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1935	10,606,000	3,050,000*	\$166,835,000
	1934	10,297,000	2,406,000*	150,469,000
Corn	1935	5,403,000	105,358,000	52,679,000
	1934	5,097,000	45,873,000	38,075,000
Wheat	1935	1,430,000	10,010,000	8,408,000
	1934	2,861,000	25,749,000	20,084,000
Grain sorghum .	1935	5,480,000	65,760,000	29,592,000
	1934	4,482,000	17,928,000	17,390,000
Oats	1935	1,701,000	39,123,000	12,911,000
	1934	1,546,000	32,466,000	13,960,000
Rice	1935	166,000	8,632,000	5,697,000
	1934	146,000	7,738,000	6,423,000
Hay (tame) ...	1935	567,000	637,000 ^b	5,096,000
	1934	517,000	379,000 ^b	5,306,000
Sweet potatoes .	1935	71,000	6,390,000	4,154,000
	1934	66,000	3,300,000	3,234,000
Potatoes	1935	54,000	3,240,000	3,402,000
	1934	54,000	3,780,000	4,234,000

* Bales. ^b Tons.

Mineral Production. A desired decrease in the production of petroleum took place in 1934; it car-

ried the yearly total of the product moderately down, to some 380,820,000 barrels, which was about 22,000,000 less than the total for 1933. The decline marked greater success in the enforcement of restriction by public authority, in the East Texas area. Over the rest of the State the production was higher as a whole for 1933, though not universally so. The yield of the East Texas area fell to 181,143,000 barrels (1934) from 204,954,000 (1933). The reported production of petroleum for 1934, stated above, included an estimated 22,500,000 barrels of illicit production ("hot oil"). The new wells completed in 1934 were numerous but did not disclose strikingly important fresh sources of petroleum.

There were brought into production, in 1934, 279 new natural-gas wells. A number, particularly in the southwestern part of the State, revealed new gas-yielding fields. Some 175,000,000 M cu. ft. of gas were burned in 1934 to produce carbon black, of which the yield was about 260,000,000 pounds and the value \$9,200,000. Great quantities of natural gas—644 billion cu. ft. in the Panhandle alone—were treated for the extraction of gasoline, and 463,400,000 gallons of gasoline were thus produced in 1934.

There were produced in Texas, in 1934, 1,187,678 long tons of sulphur; at the uniform quoted price of \$18 a ton, the indicated selling value of this product approximated \$21,370,000.

Education. The number of the population of school age (from 6 to 17 years, inclusive), was reckoned for the academic year 1935-36 as 1,558,855. This was about 0.1 per cent less than the figure set for the year before. But the State's *pro-rata* contribution to the support of the public schools, based on the population of school age, was increased for the year 1935-36 to \$17.50 for each person of school age, from \$16.50 for the year previous. Other forms of State aid to the public schools came to some \$5,000,000 a year, and the combined grants of the State to the schools furnished 60 per cent or more of their yearly expenditure as a whole. No later figures on the operations of the public schools had been collated than those for the academic year 1933-34, shown in the NEW INTERNATIONAL YEAR BOOK, 1934, p. 687.

Charities and Corrections. Heavy expense incurred in meeting the State's part of the joint Federal and State contribution to support destitute inhabitants led the State to sell on July 24 the last part of the \$20,000,000 of Relief Bonds that it had authorized for this purpose. It was expected that \$18,500,000 of the whole proceeds of the issue would have been spent by the close of 1935 and that there would remain about \$500,000 a month for the first three months of 1936.

The dispensation of aid to the destitute unemployed in the State was administered by the State Board of Control, under an act of 1934. This Board continued with its duties as to the State institutions for the care of persons and its function as purchasing agent for all State institutions and departments. It exercised control over the eleemosynary institutions, but not over the State Prison, administered by a manager. Three appointed members serving overlapping terms of six years composed the Board.

Institutions under its authority and the respective numbers of their inmates on September 30, 1935, were: For mental disorders, the Psychopathic Hospital, at Galveston (52), and State hospitals at Austin (2317), Rusk (2040), San Antonio (2554), Terrell (2364), and Wichita Falls

(2143); for epileptics, Abilene State Hospital (1088); School for the Blind (213), Austin; School for the Deaf (501), Austin; Deaf, Dumb, and Blind Institute for Colored Youths (184), Austin; Confederate Home (110), Austin; Confederate Women's Home (91), Austin; State Orphans' Home (641), Corsicana; State Colored Orphans' Home (99), Gilmer; Home for Dependent and Neglected Children (361), Waco; Juvenile Training School (795), Gatesville; Girls' Training School (235), Gainesville; Austin State School (feeble-minded, 1125), and Farm Colony Branch (159), Austin; State Tuberculosis Sanatorium (705), at Sanatorium. A Hospital for Crippled and Deformed Children (31 patients), at Galveston, was administered by the School of Medicine of the University of Texas.

The State appropriated \$200,000 in 1935 to build a sanatorium for tubercular Negroes.

Legislation. The regular session of the Legislature sent to the people, for their final action by referendum, seven proposed amendments to the State constitution. The repeal of the State's constitutional prohibition of the traffic in alcoholic beverages was one of these. Another authorized the payment of pensions of not over \$15 a month each, to inhabitants 65 years old or over who were not habitual drunkards, criminals, nor inmates of State-supported institutions. Other amendments among the proposed seven abolished the remuneration of public officers by fees, called for the State's supplying textbooks to public and also to private schools, accorded the right to commit insane persons, by due means, without trial by jury, permitted judges to suspend sentences imposed on criminals, and allowed special legislative sessions to consider amendments to the constitution.

An act of 1933 allowing uncontrolled release of natural gas for the extraction therefrom of gasoline and for the production of carbon black was repealed, in response to the view that this had wrought much depletion at small return. Two acts furthered the State's efforts to enforce its limitation of the output of petroleum: one increased by $\frac{1}{8}$ cent a barrel the State's tax on produced petroleum in order to meet the expense of the forces charged with preventing violation; the other sought to prevent the transportation of unauthorized petroleum ("hot oil") by truck and authorized the confiscation of the quantity (an estimated 3,000,000 barrels) of this article then in storage in the State. The creation of a system of State police, to supplant the old volunteer organization of Texas Rangers, was authorized.

Special Sessions. A special session convened in September to deal with the creation of a system of control over traffic in liquor, with taxing such traffic, and with the general subject of revenue for the State government and for the subdivisions, with which to pay public officers who had been supported by fees. It failed to enact the chief part of its programme. A second special session, assembling in October, considered legislation to harmonize with the Federal Social Security Act. It passed a measure creating old-age pensions.

Political and Other Events. Governor James V. Allred was inaugurated on January 15. His policy favored the effective protection of the State's deposits of petroleum and natural gas from wasteful exploitation and the early removal of the unemployed, from dependence on public sustenance, to work on public undertakings.

Texas, as a prevailingly Democratic State, was basically affected in its system of partisan politics

by a decision of the Federal Supreme Court as to the status of Negroes in that party. The Court held on April 1 that a Negro, R. R. Grovey, who had brought suit on the ground of his exclusion from the polls at a Democratic primary election, had not been deprived of any constitutional right. The Court held the Democratic party in Texas to be a voluntary organization "competent to decide its membership," and held valid the State Democratic Convention's declaration of 1932 limiting the party membership to whites. The same court had earlier set aside statutes of Texas authorizing the State Democratic Executive Committee to refuse the ballot to Negroes. The strength of the Democratic vote in the State rendered the unsailed right of the Negro to vote in the final elections nearly nugatory, since the Democratic choice at the primaries determined the ultimate outcome almost always with regard to general offices.

The State was recognized by a decision of the State Supreme Court as still holding title to the mineral deposits in lands, some 3,901,000 acres in extent, of school-grant tracts that had been forfeited and repurchased under an act of 1925. The matter involved the State's participation in over \$1,000,000 collected or due and other sums to accrue later to the State's school fund from rents and royalties payable for the exploitation of petroleum. With regard to the State's limitation of the output of petroleum the Federal Supreme Court refused to review the imprisonment, for contempt of court, of a producer of petroleum who had failed to obey a court's order restricting his production while a charge of exceeding his quota was pending.

A State election was held on August 24 to effect popular action on the seven proposed amendments to the State constitution submitted by the Legislature. The amendment repealing the prohibition of traffic in alcoholic liquor was adopted by 297,597 votes against 250,948. The amendment authorizing a system of State pensions to the elderly was ratified by a heavy majority. The voters also approved the amendment abolishing the payment of public officers by fees. Such payment had already been abolished with regard to the leading counties.

Governor Allred held that the vote for repeal rendered it useless to continue the State's far from wholly successful efforts to enforce prohibition. The failure of the Legislature to enact any measure in September for the control of the liquor traffic left the situation at loose ends, liquor being sold more or less at will.

A comparatively good cotton crop brought money to farmers in great number and helped toward righting the economic situation of Texas. The situation in 1934 had been adverse; according to the FERA's figures for that year, not to count special expenditure for aid to the agricultural class, \$36,014,837 had been paid for the support of the destitute unemployed, nearly 61 per cent of it by the FERA and almost all the rest by the State government. Conditions both on farms and in general business improved after the harvest of 1935.

The cotton growers of the State had seen their brethren in other cotton States make money in 1934, when drought cut their own yields of cotton down. Eager to recoup, they felt themselves, in some cases, held back by the Federal Administration's system of restricting acreage planted to cotton. Sentiment in the State therefore strongly favored the plan for the payment of Federal benefits on exports of cotton, advanced by Senator Connally of Texas and written into the act amending the AAA. The State, which had formerly exported

nine-tenths of its cotton crop, particularly felt the decline of foreign purchases under the "New Deal." Hand in hand with this sense of loss went a feeling of doubt as to the New Deal, apparent in the State convention of Young Democrats at Amarillo in June, which rebuffed the President's son Elliott Roosevelt by passing a resolution in favor of States' rights and condemning Federal Constitutional change.

Breaking a drought of many months' duration, torrential rains fell in central and southwestern Texas in the middle of June. Floods occurred in a number of areas, causing 15 deaths and heavy loss in property and crops. See DUST STORMS; FLOODS.

Officers. The chief officers of the State, serving in 1935, were: Governor, James V. Allred; Lieutenant-Governor, Walter F. Woodul; Secretary of State, R. B. Stanford; Treasurer, Charley Lockhart; Comptroller, George H. Sheppard; Attorney-General, William McCraw; Superintendent of Public Instruction, L. A. Woods.

Judiciary. Supreme Court: Chief Justice, C. M. Cureton; Associate Justices, Richard Critz, John H. Sharp.

TEXAS, UNIVERSITY OF. A State institution of

UNITED STATES FOREIGN TRADE IN TEXTILES AND TEXTILE FIBRES
[U.S. Department of Commerce]

	Exports		Imports	
	1934	1935	1934	1935
Cotton, unmanufactured	\$372,755,418	\$390,899,197	\$ 9,456,035	\$ 7,053,097
Cotton, semi-manufactures	9,485,972	9,029,733	3,627,833	5,682,404
Cotton manufactures	33,973,048	29,678,746	28,278,100	35,181,716
Jute manufactures	1,196,021	1,261,253	35,571,723	42,742,208
Flax, hemp, and ramie, and manufactures ..	243,163	305,943	24,868,217	28,044,913
Other vegetable fibre manufactures	886,828	963,077	13,657,760	20,960,748
Wool and mohair, unmanufactured	33,238	6,415	16,783,791	29,021,827
Wool, semi-manufactures	414,783	217,639	1,676,616	3,524,601
Wool manufactures	1,215,650	1,569,999	12,984,406	16,214,863
Hair and manufactures	2,161,625	2,239,994	1,795,899	2,606,197
Silk, unmanufactured .....	.....	.....	72,528,476	96,678,897
Silk manufactures	5,175,832	5,604,881	6,645,877	7,503,018
Rayon or other synthetic textiles	4,030,716	4,966,466	2,173,527	2,843,731
Miscellaneous textile products	8,679,536	9,425,415	10,114,991	7,739,899
Total	\$440,251,830	\$456,166,758	\$240,213,847	\$306,701,119

higher education for men and women, founded in Austin in 1883. For the autumn of 1935 the enrollment at the main university totaled 7771; that at the medical branch in Galveston was 475. The 1935 summer session had an attendance of 5435. There were 483 members on the faculty. The endowment resources (in part for the Agricultural and Mechanical College of Texas) amounted to more than \$33,000,000. The libraries contained 493,155 volumes. Buildings under construction or definitely scheduled for 1935-36 were: Main Building-Library (second unit of Library, in course of construction); two dormitories for men and two for women (one for men and one for women in course of construction); Museum, McDonald Observatory (at Mt. Locke, in course of construction). President, Harry Yandell Benedict, Ph.D.

TEXAS TECHNOLOGICAL COLLEGE.

A State coeducational institution at Lubbock, Texas, opened in 1925. The enrollment for the fall semester of 1935-36 is 2441 (agriculture, 264; engineering, 451; home economics, 266; arts and sciences, 1460). During the summer session of 1935 there were 1956 students enrolled. The teaching staff for 1935-36 numbers 138. The State appropriation for salaries and maintenance amounts to \$353,840; and the State appropriation including the summer session, \$374,525; the income from student tuition was estimated at \$136,000. The library contains 49,117 catalogued volumes and

public documents. President Bradford Knapp, LL.B., D.Agr.

TEXTILE INDUSTRY. The year 1935 fulfilled expectations by proving to be the most satisfactory in the textile industry since 1929. According to the annual review number of *Textile World*, upon which this article is based, activity in the textile field aggregated 5 per cent above the normal activity on the basis of the 1923-25 average, was 17 per cent higher than in 1934, and was only 10 per cent below the peak of 1929. Improved activity, however, was not uniform in all the major branches of the industry. Cotton consumption registered only a 4 per cent gain over the previous year and was 8 per cent less than the 1923-25 average. Silk consumption, though 7½ per cent above that of 1934, and 21 per cent over the 1923-25 average, was still far below the 1929 peak. Wool consumption and rayon consumption staged the greatest activity, the former being almost double that of 1934 and 41 per cent above the 1923-25 average, and rayon gaining 29 per cent over 1934 and more than five times the 1923-25 consumption. See STRIKES AND LOCKOUTS; LABOR ARBITRATION AND CONCILIATION.

THEATRE. See DRAMA; FRENCH LITERATURE; GERMAN LITERATURE; LITERATURE, ENGLISH AND AMERICAN; ETC.

THEOSOPHICAL MOVEMENT, THE. The Theosophical Movement can be traced throughout history, wherever thought has struggled to be free and wherever spiritual ideas, as opposed to form and dogmatism, have been promulgated. Theosophy is not a creed but a statement of the laws that govern evolution—physical, intellectual and spiritual—as those laws have been handed down and restated periodically by a long line of spiritual teachers. The Theosophical Movement is not confined to any organization but is made up of those who work for the spreading of these ancient truths, which constitute an inspiring and an all-embracing philosophy of life, rooted in the concept of the unity of all life.

Theosophy teaches that the Deity is a Boundless, Immutable, and Impersonal Principle, which is everywhere present but is inconceivable by human intellect; that man is a soul evolving gradually towards the perfection which the Buddhas and Christs of the race exemplify, and that evolution takes place, life after life, in accordance with the efforts of each and under the unerring working of the universal law of action and reaction, cause and effect, which the Orientalists call Karma and which is itself an aspect of the Unknown Deity.

The outstanding event connected with the The-

osophical Movement in 1935 was the death of George Russell (q.v.) who, under the pen name Æ, had been familiar for many years to all lovers of the poetry of mysticism. His vital connection with Theosophy as restated by Madame H. P. Blavatsky, from his young manhood to his death, was strikingly set forth in *The Aryan Path* for December, 1935.

THEOSOPHICAL SOCIETY IN

AMERICA. The American section of the Theosophical Society, a world-wide organization founded in New York in 1875 by Mme. Helena P. Blavatsky and Col. Henry S. Olcott. World Headquarters were later established by them at Adyar, India, near Madras. In 1935 branches existed in 49 nations, on six continents. The Theosophical Society in America had, in 1935, 154 local lodges. The president of the society was Sidney A. Cook. Headquarters are in Wheaton, Ill.

THIRD INTERNATIONAL. See COMMUNISM.

THOMAS, M(ARTHA) CAREY. An American educator, died in Philadelphia, Pa., Dec. 2, 1935. Born in Baltimore, Md., Jan. 2, 1857, she was graduated from Cornell University in 1877 and was elected to Phi Beta Kappa. Desirous of continuing her studies, she persuaded the trustees of Johns Hopkins University to allow her to attend a seminar there. She studied at the University of Leipzig (1879-82), but a new ruling prevented her from receiving the doctorate degree. Finally, after a stiff examination, the University of Zurich gave her the degree of Ph.D., *summa cum laude*, and she was the first woman to receive such a degree from a European university. From 1882 to 1883 she studied at the Collège de France and the Sorbonne, and when she returned to America in 1884, she was appointed dean, professor of English, and an organizer of Bryn Mawr College.

She held the post of professor of English and dean until 1894, and was the first American college official to use the title of dean, which was an English importation. She was then elected president of the College, and in 1903 became a life member of the board of trustees. To Miss Thomas must go the credit for the organization of the Bryn Mawr curriculum on the now-famous "group system," with an undergraduate course of four years and a graduate course of three years leading to the Ph.D. degree. Self-government for the students was inaugurated and an exchange system of professors evolved. In 1910, the first graduate School of Social Economy and Social Research in the United States was founded by her at the College, and in 1922 the first School for Workers in Industry was established under her guidance on the campus. In 1922 when she retired as president emeritus, the Alumnae established the M. Carey Thomas Prize to be "given at intervals to an American woman in recognition of eminent achievement" and awarded it first to her. In this year she also was awarded the degree of LL.D. by Johns Hopkins University, the first woman to be so honored.

Besides her activities connected with Bryn Mawr, she founded, with Mary Elizabeth Garrett, in 1885, the Bryn Mawr School for Girls and served as treasurer of the corporation (1890-1915) and as chairman of the board (1915-1927). Eight years after the founding of this school, she and Miss Garrett succeeded in raising a \$500,000 endowment for the newly-formed Medical School at Johns Hopkins on the condition that women were to be admitted on an equal footing with men

students. From 1915 she served as chairman of the women's advisory committee of the Medical School. The question of woman suffrage captured her interest and from 1906 to 1913 she was president of the National Collegiate Equal Suffrage League. Also, she was a founder of the Association to Promote Scientific Research by Women and of the International Federation of University Women.

Her publications include *Sir Gawain and the Green Knight* (1893), the thesis written for her degree; a monograph on *The Higher Education of Women* (1900), prepared at the request of the U.S. Department of Education, and which received a gold medal at the Paris Exposition of 1900 and at the St. Louis Exposition of 1904; *Should the Higher Education of Women Differ from That of Men?* (1901); and a *Statistical Study of Coeducation in the United States for The Encyclopedia Americana*, as well as many articles on education and topics of interest to women.

TIBET, ti-bét'; tib'et. A central Asian territory, nominally under the suzerainty of China. Area, 463,200 sq. miles; population, 2,000,000. Lhasa (capital), had about 20,000 inhabitants. Agriculture was the main industry. Tibet's first factory, built at Tapchi and operated by electricity produced by water power, is now engaged in making copper coins, paper money, and army uniforms and equipment.

History. The report published in 1934 that an infant had been selected to succeed the Dalai Lama, who died Dec. 17, 1933, proved to be erroneous. It was announced in July, 1935, that the search for the new Dalai Lama had officially begun. The Tibetans believe that when the Dalai Lama, the spiritual and temporal ruler of the country, dies his spirit passes directly into the body of a new-born child. The latter was to be identified by certain marks on his body and by his ability to handle instinctively the rosary, bell, and other personal belongings of the departed ruler.

Meanwhile the Chinese Nationalist Government at Nanking was continuing its efforts to strengthen its nominal suzerainty over Tibet. The last Dalai Lama, being hostile to Chinese rule, had administered his country as a virtually independent State. A Chinese mission sent to Tibet in 1934 to induce it to reenter the Chinese republic returned unsuccessful, but another mission in 1935 appeared to have paved the way for a rapprochement. The mission went ostensibly to honor the late Dalai Lama, whose remains were transferred to a newly completed tomb in 1935. The mission used its influence on behalf of the Panchan or Teshu (Tashi) Lama, second in rank to the Dalai Lama in the Tibetan clerical hierarchy, who had been in exile in China since 1924. Later in the year it was reported that the Panchan Lama was returning to Tibet, a development which was regarded as favorable to the restoration of Chinese authority.

TIMOR, té-môr', PORTUGUESE. The eastern part of the island of Timor together with the territory of Ambeno and the nearby islands of Pulo Caming and Pulo Jako, forming colonial possession of Portugal. Total area, 7330 sq. miles; population (1931), 474,363. Capital and port, Dilli. Copra, coffee, sandal-wood, sandal-root, and wax were the principal exports. In 1932, imports were valued at 1,403,563 patacas; exports, 691,269 patacas. The decree of May 9, 1935, changed the fiscal year to agree with the calendar year and approved the budget expenditure of 28,400,352 paper escudos

(escudo was worth \$0.0449 on June 13, 1935) for the 18 months ending Dec. 31, 1936.

TIN. According to the American Bureau of Metal Statistics the world production of tin in ore in 1935, in terms of recoverable basis, is shown in the accompanying table. Accounting is on the basis of exports in most instances rather than actual production. The figures for Bolivia, Netherlands India, Malaya, Nigeria, and Siam are as communicated through the International Tin Committee.

WORLD TIN OUTPUT, 1935 (LONG TONS)

Australia *	3,050	Japan *	2,060
Bolivia	27,168	Nigeria	6,949
British India *	3,625	Siam	9,779
China *	8,675	South Africa	615
Netherlands India ..	24,613	Great Britain * ...	1,782
Malaya	45,939	Elsewhere *	8,600
Indo-China *	1,210	World total ..	144,065

* Preliminary. * Mainly Belgian Congo.

The visible supply of tin in all quarters was 15,318 tons on December 31, as compared with 18,172 tons at the close of 1934. The average price of Straits tin in New York for the year was 50.39 cents ranging from a low of 45.75 cents in March to a high of 54 cents in October, and closing the year at 48.60 cents. Imports into the United States in 1935 from all sources aggregated 58,779 tons, as compared with 41,349 tons in 1934. In the 12 months ending Oct. 31, 1935, the consumption of tin by other leading countries were: United Kingdom, 21,881 tons; Germany, 10,943 tons; France, 8,204 tons; Russia, 7,004 tons; Italy, 5,307 tons.

TIROL. See AUSTRIA.

TOBACCO. The tobacco crop in the United States in 1935 was estimated at 1,283,742,000 lb., an increase of about 23 per cent from the 1934 crop of 1,045,660,000 lb., yet somewhat below the 5-year (1928-32) average production of 1,432,845,000 lb. The harvested acreage totaled 1,458,300 acres, compared with 1,270,600 in 1934, while the 1935 average acre yield was 880 lb., compared with 823 in 1934. Based on the December 1 estimate of the average farm price of 18.5 cents per pound, the farm value of the 1935 crop would total \$237,479,000, which did not include rental and benefit payments to tobacco growers, estimated at about \$30,000,000 for 1935.

Production by types was estimated for flue-cured, 785,993,000 lb.; fire-cured, 120,887,000; air-cured, light, mostly Burley, 260,711,000; air-cured, dark, 33,871,000; cigar types, 82,105,000, comprising filler 42,530,000, binder 32,090,000, and wrapper, 7,485,000; and miscellaneous, 175,000 lb. The increased production for all types over 1934 was accounted for mainly by an increase of about 230,000,000 lb. or about 41 per cent in flue-cured tobacco. North Carolina retained the lead of the producing States with 561,060,000 lb., and was followed by Kentucky with 247,429,000; Virginia, 95,500,000; South Carolina, 89,725,000; Tennessee, 88,024,000; Georgia, 68,053,000; Pennsylvania, 26,910,000; Maryland, 26,350,000; Ohio, 21,986,000; Connecticut, 16,905,000; Wisconsin, 14,700,000; and Florida, 8,680,000 lb. In regard to the tobacco programmes inaugurated under the Agricultural Adjustment Act and supplemental legislation, see AGRICULTURE, under *Agricultural Adjustment*.

The 1935 crops of tobacco in other important producing countries, as estimated by different official agencies, were for Japan, 149,055,000 lb.; China (flue-cured), 155,000,000; Greece, 92,509,000; Turkey, 74,186,000; Hungary, 41,486,000; Bulgaria, 74,186,000; Czechoslovakia, 27,812,000;

Algeria, 38,581,000; Yugoslavia, 24,251,000; Belgium, 15,873,000; Brazil, 57,750,000; Canada, flue-cured 35,000,000 and Burley 10,500,000; and Cuba, 41,913,000 lb. The 1934-35 crop of Germany was estimated at 76,736,000 lb. and of Siam at 20,467,000 lb.

Collections from internal revenue taxes on tobacco in the United States for the fiscal year 1935 amounted to \$459,178,625, an increase of \$34,009,728, or 8 per cent, compared with the previous year. Receipts from taxes on small cigarettes amounted to \$385,459,570, which was 84 per cent of the total taxes collected on tobacco, and \$35,797,625 over 1934. The taxes collected on smoking and chewing tobacco declined to \$54,372,414 in 1935 from \$55,298,629 in 1934; increased on large cigars to \$11,692,859, a gain of \$59,562; and decreased on snuff to \$6,511,622, a loss of \$276,528 compared with 1934. Most of the total tobacco receipts were collected in North Carolina, Virginia, Kentucky, New Jersey, California, Ohio, and Pennsylvania, in the order named. In the fiscal year 1935 the tobacco processing tax amounted to \$32,161,943, and together with other tobacco adjustment taxes totaled \$32,725,501. The tobacco sales tax amounted to \$3,231,375. The Commissioner of Internal Revenue reported that in the calendar year 1934, there were manufactured 129,976,333,580 cigarettes weighing less than 3 lb. per 1000, compared with 114,874,217,470 in 1933. Estimates placed the 1935 output at about 133,000,000,000 cigarettes. Exports of leaf tobacco fell from 440,866,494 lb. in 1934 to 396,330,308 in 1935.

Consult also *Tobacco Markets and Conditions Abroad* (weekly, ed. by B. D. Hill, U.S. Department of Commerce); *Agricultural Outlook for 1936*.

TOBAGO. See TRINIDAD.

TOGO, FRENCH. The part of the former German protectorate mandated to France by the League of Nations. Area, 21,893 sq. miles; population (1933), 753,812 including 512 Europeans. Lomé, the capital, had 10,900 inhabitants in 1933. Palm kernels, cacao, copra, ginned cotton, and dried fish were the main products for export. In 1933, imports were valued at 41,605,232 francs; exports, 27,353,970 francs (franc averaged \$0.0501 for 1933). The local budget for 1933 was balanced at 34,127,500 francs. Government was administered by a commissioner aided by an economic and financial council.

TOGOLAND. The part of the former German protectorate of Togo, confirmed as a British mandate by the League of Nations, and attached to the British Gold Coast colony for administrative purposes. Area, 13,041 sq. miles; population (1934), 328,034. See GOLD COAST.

TOLEDO, UNIVERSITY OF THE CITY OF. A municipal, coeducational institution of higher learning in Toledo, Ohio, founded in 1872. The enrollment for the autumn of 1935 totaled 2409, of whom 1560 were men and 849 women. The faculty had 78 full-time members. The 1935 summer session enrollment was 435. The value of grounds, buildings, and equipment was \$3,500,000, and the income for 1934-35 (exclusive of gifts) was \$319,460. Gifts to the value of \$6690 were received. The library contained 35,973 volumes. President, Philip Curtis Nash, M.C.E.

TONGA (FRIENDLY) ISLANDS. A kingdom under British protection in the South Pacific, comprising three main groups of islands (Tongatabu, Haapai, Vavau) and the outlying islands of Niuafoou, Niuatobutabu, and Tafahi. Total area,

385 sq. miles; population (April, 1934 census), 30,482. During 1934 there were 1191 births, 430 deaths, and 188 marriages. Capital, Nukualofa. Copra was the main product. Bananas, citrus fruits, and native vegetables were other products. In 1934, imports were valued at £48,526; exports, £77,842. For the fiscal year ended June 30, 1934, revenue amounted to £54,743; expenditure, £64,620. Queen, Salote (Apr. 12, 1918).

TONGKING. See FRENCH INDO-CHINA.

TORONTO, UNIVERSITY OF. An institution of higher education in Toronto, Ont., Canada, founded in 1827 and supported by the provincial government. The 1935 autumn enrollment was 7253. The faculty numbered 996 members. The total expenditures for the year 1934-35 for salaries and maintenance was \$2,607,797. The library contained 316,704 volumes and 118,599 pamphlets. President, Henry John Cody, M.A., D.D., LL.D.

TOWNSEND PLAN. See OLD AGE PENSIONS.

TRADE UNIONS. Since the American Federation of Labor is treated *in extenso* in another place, it will be sufficient to mention here that according to the Report of the Executive Council to the fifty-fifth annual convention at Atlantic City, New Jersey, Oct. 7, 1935, the average membership for the fiscal year 1935 was 3,045,347. This represents an increase of approximately 650,000 members over the low point reached in 1933 and falls considerably short of the peak achieved in the year 1920 when the membership topped the 4,000,000 figure.

Two significant studies came to hand during the year which give some indication of the general drift in the United States with regard to trade union membership. The first was an analysis of employee elections conducted by the National Labor Relations Board (*Monthly Labor Review*, May, 1935). According to this article: "Employees eligible to vote in these elections numbered 45,397 and 36,433 cast a vote. Of the 35,024 votes which were valid, 20,682 (59 per cent) were for trade unions and 12,037 (34.0 per cent) were for company unions or employee-representation plans. There were 2135 (6.1 per cent) 'other' votes, that is, votes not designating any representation." This may be interpreted to mean that, after eliminating workers too indifferent even to vote—about one-fifth of all—but three-fifths of those remaining declared in favor of trade unions. Even more surprising is the fact that, to quote the analysis further: "In comparison with the results of elections conducted by the National Labor Board, these figures show a decline in the percentage of votes for trade unions. In the National Labor Board elections trade unions won 69.4 per cent of the valid votes, company unions 28.5 per cent, and no representation was chosen in 2.1 per cent." In the light of the fact that there is as yet no abatement of the wave of labor unrest characteristic since 1933 (see STRIKES AND LOCKOUTS), this decline of interest in union membership is an enigma on which no light is cast in the report. It is stated, however, that the A.F. of L. unions are still dominant in the factories polled in so far as a declaration for union representation resulted.

The second study had specifically to do with company unions, and it should be viewed in the light of the figures cited above. It was discovered that of 593 company unions with a total membership of 530,388, but 10 were, judged by minimum criteria for establishing independence from employer domination, free of paternalistic control. It is very

significant that 64 per cent of these unions were established during the period of NRA.

Great Britain. In Great Britain collective bargaining machinery has been in the making since the 1870's. The Ministry of Labor has recently begun the publication of a series of volumes reporting and analyzing the types of agreements in force in the various industries, the first of the series covering mining and quarrying, building and woodworking, and allied industries, and engineering, shipbuilding, iron and steel, and other metal industries. Since these industries normally employ about four and a half million workers, one-third of the working population eligible for unemployment insurance benefits, and since both employers and employees are highly organized, the findings with regard to them have great significance. It is, therefore, of the first interest that the recognized prerequisites to a successful collective agreement are nation-wide and industry-wide effective employer and employee organizations. Without these two factors in the picture, it is conceded that nothing important can be done. While there may be more than one organization on both sides, this does not preclude success, provided they are able to act jointly. In the ship-building and repairing industry, for example, there are 24 trade unions that have found it possible to act in collaboration amicably. A frequent provision of these agreements is that machinery shall be set up to care for disputes which threaten the stoppage of work during the life of the agreement. Usually such machinery reaches down to the workmen directly concerned and involves preliminary discussion with the managerial personnel; but if no satisfactory arrangement can be made, the dispute is carried by orderly steps to the attention of the union officials and the officials of the employer's association in the locality. It can be handed on from this point to higher officials on either side, and the assumption is that somewhere along the line an agreement will be arrived at which will avoid a strike. Various ingenious methods of handling the wage question, especially in industries using the piece-work system, were found, including the provision that wages shall be adjusted downward as the cost of living declines, but shall not descend below a fixed point. The outstanding point about the report is that the entire machinery, which has been in the process of evolution for upwards of 65 years, is predicated upon the existence of strong trade unions.

Germany. In Germany trade unions were destroyed shortly after the National Socialist government assumed power. As a substitution for them the so-called Labor Front has been developed and its status and purposes were defined in a decree issued on Oct. 24, 1934. From this document it appears that the announced purpose of the Labor Front is to insure industrial peace and further the just interests of both employers and employees, and also to effect adjustments when they conflict. The decree states that, "The aim of the German Labor Front is to form a real national and working community of all Germans. . . . The German Labor Front is an organ of the National Socialist Party . . . is an organization of German brain and hand workers. In it are mainly the members of the former labor unions, the former unions of salaried employers, and the former associations of employers, etc., who are united as members possessing equal rights. . . . The property of the former organizations . . . including their auxiliary and substitute organizations, managements of property, and economic enterprises, forms the property of

the German Labor Front." This would seem to define the Labor Front as a company union on a national scale, and it is obviously in line with the Fascist theory of compulsory class-collaboration in the national interest.

On Feb. 26, 1935, the status of labor in Germany was further defined by an administrative order requiring all workers, as a condition of employment, to be in possession of a "labor book" in which such data as personal description of the holder, date and place of birth, citizenship, family relations, residence, description of training and where obtained, alternative occupations, past experience, special abilities such as ability to drive a motorized vehicle, must be recorded, properly attested by signatures, and in the possession of the worker when he applies for a job. In this fashion the National Socialist Government expects to be able to compile statistics on the labor force of Germany more comprehensive than any now in existence, to derive material which will allow it to distribute the labor force more equitably, and give it the figures on which to base a training programme for new workers coming of age each year.

TRANSCAUCASIAN SOVIET FEDERATED SOCIALIST REPUBLIC. One of the seven constituent republics of the Union of Soviet Socialist Republics. It comprises the Armenian S.S.R. (q.v.); the Azerbaijan S.S.R.; and the Georgian S.S.R. (q.v.). Total area, 71,255 sq. miles; total population (Jan. 1, 1933), 7,110,000. Capital, Tiflis.

TRANS-JORDAN. An Arab territory in Asia Minor forming a part of the British Mandate of Palestine but governed by an independent Arab administration under Emir Abdullah Ibn Hussein. Area, uncertain; population approximately 300,000 of whom 260,000 are Arab Moslems. Amman is the capital. Budget estimates (1935-36): revenue, £P370,321; expenditure, £P373,761. There is a legislative council of 6 official and 16 elected members. High Commissioner in 1935, Lieut.-Gen. Sir A. G. Wauchope, who is also High Commissioner for Palestine. See ARABIA under *History*.

TRANSMUTATION. See PHYSICS.

TRANS-OCEANIC AIR SERVICE. See AERONAUTICS.

TRANSVAAL. See SOUTH AFRICA, UNION OF.

TREATIES. See INTERNATIONAL LAW.

TRENGGANU. See UNFEDERATED MALAY STATES.

TRIBOROUGH BRIDGE. See BRIDGES.

TRINIDAD. A British colony near the coast of Venezuela, comprising the islands of Trinidad (1862 sq. m.) and Tobago (114 sq. m.). Total population (1934 estimate), 425,572 compared with 412,783 (1931 census). Chief towns: Port of Spain (capital), 72,518 inhabitants; San Fernando, 14,287. In 1934 there were 12,743 births, 7970 deaths, and 1918 marriages. The 297 primary, intermediate, and secondary schools had 74,999 pupils enrolled during 1934; the four training colleges for teachers had 100 students.

Production and Trade. Petroleum, asphalt, cacao, citrus fruits, sugar, coconuts, and coffee were the main products. The grapefruit crop for 1934-35 was estimated at 45,000 cases. During 1934 the output of crude oil amounted to 10,894,363 barrels (of 35 imperial gall.); asphalt, 92,829 tons; sugar, 105,342 tons. In 1934, exclusive of transshipments and specie, imports were valued at £4,404,580; exports (including reexports of £638,242), £5,271,115 of which petroleum accounted for £2,934,174; asphalt, £166,052; sugar, £916,232; cocoa,

£499,656. The government-owned railway (123 miles long) carried 1,188,555 passengers and 370,251 tons of freight during 1934.

Government. For 1934, revenue totaled £1,710,468; expenditure, £1,706,302; public debt, £4,242,993 against which the sinking funds amounted to £1,320,975. Budget estimates for 1936: revenue, \$9,040,000; expenditure, \$9,016,000. The colony is administered by a governor aided by an executive council of 7 members, and a legislative council of 26 members. Governor in 1935, Sir A. C. Hollis.

History. On Jan. 25, 1935, work was started on the \$4,750,000 government plan for the development of the harbor at Port of Spain into a deep-water port. During August, 1935, minor public works schemes were approved in order to relieve unemployment. The legislature approved, Nov. 16, 1935, an annual expenditure of \$360,000 for the following eight years as a subsidy for the depressed cocoa industry.

TRINITY COLLEGE. An institution for the higher education of men in Hartford, Conn., founded in 1823 as Washington College and changed to Trinity College in 1845. For the autumn term of 1935 the enrollment was 489. There were 50 members on the faculty. The endowment fund of the college was \$3,100,000, and the income totaled \$305,000. The library contained 115,000 volumes and 50,000 pamphlets. President, Remsen B. Ogilby, Litt.D., LL.D.

TRIPOLITANIA. See LIBYA.

TROY. See ARCHÆOLOGY.

TRUCIAL OMAN. See OMAN, TRUCIAL, under ARABIA.

TSANA, LAKE. See EGYPT and ETHIOPIA, under *History*.

TUAMOTU ISLANDS. See OCEANIA, FRENCH ESTABLISHMENTS IN.

TUFTS COLLEGE. A nonsectarian institution for the higher education of men and women in Medford, Mass., founded in 1852. The registration for the autumn term of 1934 was 2045. There were 568 faculty members. The productive funds of the college amounted to \$7,291,900, and the income for the year was \$107,222. The library contained 113,000 volumes. President, John Albert Cousens, LL.D.

TULANE UNIVERSITY OF LOUISIANA, THE. An institution of higher education in New Orleans, founded in 1834. The total enrollment for the autumn of 1935 was 3151, of whom 639 were in the H. Sophie Newcomb College for Women. There were 987 students enrolled in the 1935 summer session. The faculty numbered 416. The productive funds for the fiscal year ending Aug. 31, 1935, amounted to \$10,421,985; the income for the year was \$1,049,010. Gifts and bequests to the value of \$393,317 were received. In the library there were 180,714 volumes. President, Albert Bledsoe Dinwiddie, Ph.D., LL.D.

TUNISIA. A French protectorate in North Africa. Capital, Tunis. With an area of 48,313 miles, Tunisia had an estimated population in December, 1933, of 2,500,000 (2,410,692 at the 1931 census). Moslems comprised 90 per cent of the population. The chief cities, with their 1931 populations, are: Tunis, 202,405; Sfax, 39,969; Sousse, 25,324; Bizerta, 23,206. The school attendance in 1932 was 84,035.

Production. Agriculture and stock raising are the principal occupations; mining and fishing also are important. The area under cultivation in 1932 was 7,250,000 acres. In the same year livestock included 453,000 cattle, 2,931,000 sheep, 1,668,000

goats, 24,000 swine, 103,000 horses, 237,000 mules and asses, and 169,000 camels. Wool production was 11,023,000 lb. in 1934. The 1934 crop yields were (in thousands of units): Wheat, 13,779 bu.; barley, 6890 bu.; oats, 1378 bu.; wine, 44,909 gal.; olive oil, 15,942 gal. The output of phosphates in 1934 was 1,765,500 metric tons; iron ore, 546,500 metric tons; lead ore, 6398 metric tons. Wool spinning and weaving, leather working, and the manufacture of carpets, pottery, matting, etc., are native industries.

Foreign Trade, etc. Merchandise imports in 1934 were valued at 1,340,400,000 francs (1,829,880,000 in 1933) and merchandise exports at 705,960,000 francs (745,080,000 in 1933). Olive oil, phosphate rock, wheat, and wine were the principal 1933 exports, in order of value. Cotton piece goods, metal manufactures, refined sugar, machinery, barrels, and vats, automobiles, wheat, and chemicals were the leading imports. France in 1933 supplied 68.9 per cent of all imports and purchased 54.4 per cent of all the exports.

Budget estimates for the year ended Mar. 31, 1935, placed revenue at 574,952,990 francs and expenditure at 574,798,138 francs. The public debt on Dec. 31, 1931, was 526,134,000 francs. In 1933 there were 1282 miles of railway line, about 3525 miles of good roads, and 21 ports, of which Sfax was the most important. The net tonnage of vessels entering the ports with cargo in the overseas trade during 1933 was 4,618,000 (4,480,000 in 1932).

Government. Tunisia is a regency under the control of the French Foreign Office, which acts through a Resident-General, who is also Minister of Foreign Affairs for Tunisia. There is a ministry of 11 departments (8 French and 3 Tunisian). The occupant of the throne in 1935 was Sidi Ahmed Bey; French Resident-General, M. Peyrion (appointed July 23, 1933).

TUNNELS. As the year came to a close, the longest tunnel in the greatest tunneling operation the world has ever known was "holed through." The headings on the 18-mile East Coachella Tunnel on the Los Angeles-Colorado River Aqueduct met on Jan. 2, 1936. This remarkable tunneling work has been noted in previous YEAR BOOKS and current progress is commented on under AQUEDUCTS.

In New York City, the 20-mile new deep distributing tunnel, which completes a distributing loop some 700 ft. below the streets of the city was officially approved and was ready for service.

Perhaps the most remarkable single work of the year was the vehicular tunnel which forms an important link in the greatest bridge building operation of the ages—the San Francisco-Oakland or Bay Bridge.

East River Vehicular Tunnel, New York. As the year came to a close, the construction of twin vehicular tubes under the East River at 38th Street, New York was practically assured by a PWA allotment of \$58,365,000. These tubes will connect Manhattan and Queens on the continuation of the new Hudson River vehicular tunnel now being rapidly completed by the Port of New York Authority, and it is hoped that it will be completed in time to provide a direct route from New Jersey to the proposed site of the 1939 World's Fair at Flushing, Long Island.

Mid-Town Tunnel, New York. Very satisfactory progress was made during the year on this, at present, single tube vehicular tunnel under the Hudson River at 38th Street, New York. The New Jersey land section of this work presents un-

usual difficulties due to the fact that the tunnel comes out at the base of the lower Palisades. Inclined ramp approaches require extensive excavation. Bids submitted in this work in November were rejected and the contract was advertised for a new letting in the hope of securing more favorable prices.

Pasadena Tunnel. A high-speed of over 2000 ft. per month was maintained in driving this 13 ft. diameter tunnel which will form part of the distributing system for the water supply to be furnished by the Metropolitan Water District of Southern California. The tunnel is 12,000 ft. long and runs through damp sand and gravel at depths of 30 to 80 ft. Horseshoe shaped steel beam supports are used with wood lagging.

Yerba Buena. This tunnel through Yerba Buena Island, which connects the two great sections of the Bay Bridge at San Francisco, is of record size. It is the greatest section in America and only misses by a few feet being the largest in the world. The famous Rove canal, tunnel at Marseilles, France, has a finished span of 72.2 ft. against a 65.5 ft. clear span at Yerba Buena. The former work, however, required a maximum width of excavation of approximately 80 ft, which, because of the thicker lining used, is but one foot greater than that of the Yerba Buena bore.

The construction of this tunnel was particularly interesting because the lining was completely placed before the greater part of the core excavation was removed. The space for the side walls was first cut, these walls were then lined, the arch was cut, timbered against the central core, and then lined. Finally, the central core was excavated completing the section. Sixteen inch curved steel beams, used to support the roof, were embedded in the final concrete roof lining, which varied in thickness from 3 to 6½ feet.

TURBINES. See STEAM TURBINES

TURKEY. A republic comprising parts of Asia Minor and the Balkan peninsula as well as Imbros, Tenedos, and the Rabbit Islands in the Aegean Sea. Capital, Ankara (Angora).

Area and Population. Turkey has an estimated area of 294,492 square miles (285,258 in Asia and 9257 in Europe). Preliminary returns of the census of Oct. 20, 1935, placed the population at 16,188,767 (13,648,270 at the 1927 census). The 1935 population comprised 7,974,925 males and 8,213,842 females. The 1935 populations of the chief cities, with 1927 census figures in parentheses, were: Istanbul (Constantinople), 740,751 (690,857); Izmir (Smyrna), 170,410 (153,924); Ankara (Angora), 125,414 (74,553); Bursa (Brusa), 72,326 (61,690); and Konya (Konia), 52,594 (47,496). Adana in 1927 had 72,577 inhabitants. The population is overwhelmingly Moslem in religion.

Education. The Ministry of Education reported that 45 per cent of the population was able to read and write in 1934. The school enrollment in 1933 was: Primary, 567,963; secondary, 43,511; higher education, 5497. The principal university is at Istanbul (5398 students in 1933). The Turkish alphabet with Latin characters replaced Arabic throughout Turkey by government decree in 1930.

Production. More than 80 per cent of the working population is engaged in agriculture. In 1930 there were 14,217,000 acres of arable land and 21,783,000 acres of woods and forests. The crop yields in 1934 were (in thousands of units): Wheat, 88,546 bu.; barley, 86,311 bu.; corn, 12,692 bu.; oats, 9954 bu.; tobacco, 88,185 lb.; olive oil (Aegean re-

gion, 1934-35), 8625 gal.; raisins (Ægean region), 88,180 lb.; figs (Ægean region), 57,320 lb.; cotton (lint, 1934-35), 36,806 lb.; opium, 551 lb. Livestock in 1934 included 5,169,000 cattle, 10,719,000 sheep, 1,564,000 horses, mules, and asses, 539,000 buffaloes, and 8,998,000 goats. Production of coal was 2,288,000 metric tons in 1934; of lead, 2800 metric tons in 1933; of silver, 4800 kilograms in 1931. Emery, copper, zinc, chrome, boracite, argile, meerschaut, mercury, gold, manganese, and antimony are produced on a small scale. Manufacturing is increasing under government sponsorship. The most important industrial enterprises in 1935 were flour mills, sugar refineries, cement plants, olive-oil presses and refineries, soap factories, canning plants, leather tanneries, and textile mills.

Foreign Trade. General imports in 1934 were valued at 86,800,000 Turkish pounds (£T74,700,000 in 1933) and general exports at £T92,100,000 (£T96,100,000 in 1933). Cotton fabrics, iron and steel, machinery, coal and mineral oils, cotton yarn, and coffee, tea, and cacao are the leading imports and leaf tobacco, raisins, eggs, shelled filberts, live animals, figs, and barley are the chief exports. Germany in 1932 supplied 23.2 per cent of the imports; Italy, 12.9; United Kingdom, 12.4; France, 8.4; United States, 2.6, while Italy took 16.1 per cent of the exports; Germany, 13.5 per cent; United States, 11.9; United Kingdom, 9.8; and France, 7.7.

Finance. The budget for 1935-36 (June 1-May 31) estimated receipts at £T195,013,000 and expenditures at £T195,011,053, as compared with £T184,081,000 and £T184,075,636, respectively, for 1934-35. The 1935-36 national defense budget was £T69,799,232, or 35.6 per cent of the total expenditures. Closed accounts for 1933-34 showed receipts of £T198,300,000 and expenditures of £T201,000,000. The public debt on May 31, 1934, totaled £T433,600,000 (domestic, 214,800,000; foreign, 218,800,000), compared with £T442,200,000 on May 31, 1933. The Turkish pound (par value \$7.44 in 1935) exchanged at an average of \$0.4729 in 1932, \$0.4726 in 1933, and \$0.4726 in 1934.

Communications. Turkey at the beginning of 1935 had 3770 miles of state-owned railway lines and the mileage was extended further by the completion in November, 1935, of two important lines—the Irmak-Filios and Fevzipasha-Diarbekr lines. The Irmak-Filios line, 245 miles long, took eight years to build and cost \$40,000,000. It connects the Soguldak coal fields on the Black Sea coast with the newly developed industrial region of central Anatolia. The other new line is 315 miles long and cost \$60,000,000. It will permit the development of a region rich in minerals and other resources. The Turkish merchant marine on June 30, 1935, comprised 182 vessels of 199,284 gross tons. Air lines connect Istanbul with Ankara and with many European cities. Highways extended about 9870 miles, excluding unsurveyed tracks.

Government. The Constitution of 1921, as amended Apr. 20, 1924, vested executive and legislative power in the Grand National Assembly as the sole representative of the people. The Assembly exercised executive power through the President, who is elected by the Assembly, and through a Council of Ministers chosen by the President. Terms of office of both President and Assembly members are for four years. In practice, Turkey was a dictatorship under Kemal Atatürk, who was elected first President on Oct. 29, 1923, and was reelected in 1927, 1931, and 1935. For the 1935 elections, see *History*.

HISTORY

Domestic Affairs. The process of forging a united nation along western lines continued at top speed in Turkey during 1935 under the strong hand of Mustafa Kemal Atatürk. The dictator was reelected to the Presidency for another four-year term at the reopening of the Grand National Assembly on March 1, thus insuring the continuance of his work, which in a period of 15 years had infused new life into the Turkish nation.

The continued process of modernization was reflected by developments in many different fields. An outstanding event in the political sphere was the participation of women in the national elections for the first time on February 8, when 17 women were elected Deputies to the Grand National Assembly. Due to the reapportionment of seats on the basis of one Deputy to every 40,000 inhabitants, the new National Assembly contained 399 Deputies, or 82 more than the preceding one. All of the Deputies except 15 independents were members of Kemal Atatürk's People's party, the only political organization permitted.

Fear that the Union of Turkish Women might develop into a political party, now that women had the vote, led the government to order its dissolution late in April. In the belief that Masonic principles were incompatible with its nationalistic policy, the government on October 12 ordered the suppression of all Masonic lodges. Other moves of the same general character were the establishment of a board of censors over moving pictures; the banning of the public wearing of clerical garbs, effective June 13; the extension of Turkish citizenship to some 2000 denationalized White Russians; the substitution of Sunday as the weekly day of rest in place of Friday, the traditional Moslem Sabbath; the opening of the mosque of Santa Sophia at Istanbul as a museum of Byzantine art on February 1; and the completion of the first stage of the preparation of a new simplified Turkish language.

Progress in the economic field was no less marked. The five-year industrialization programme was carried forward under the direction of the Sumer Bank. A cotton textile factory at Kayseri, equipped with Russian machinery, started operations on July 1. Contracts were awarded for two additional cotton textiles mills and new silk and rayon factories were opened in the autumn. The country's first glass factory started operations and production in the first paper mill was scheduled to begin in January, 1936. Plans were completed for the establishment of a small iron and steel industry at Zonguldak.

On June 14, the government created the Eti Bank, with a capital of £T20,000,000, for the purpose of establishing and developing electrification and new mining projects. The bank was given broad powers to acquire, sell, and regulate properties, issue bonds, guarantee loans, and intervene in the purchase and sale of such properties. The British-owned Izmir-Aidin Railway was purchased by the Ankara Government on May 1 for approximately \$8,500,000. Effective July 21, the government also acquired the Constantinople Telephone Co., the purchase price being £800,000 sterling. In preparation for the reform of the fiscal system, three French experts were engaged to investigate phases of Turkish finance and submit recommendations.

Alarmed by the warlike tendencies in Europe, the government placed great emphasis upon strengthening the national defenses. The budget

adopted in March, 1935, increased the total defense appropriations by £110,000,000 to a total of £166,947,062. On May 18 the cabinet decreed compulsory pre-military training for children of both sexes. On May 25 Premier Ismet Inonu declared the air force must be increased to 500 planes, at a cost of \$24,000,000 annually. In June the Premier appealed for public subscriptions to carry the new air programme into effect, and a liberal response was reported. Despite this, an additional air appropriation of about \$17,500,000 was authorized by a bill adopted by the National Assembly on December 25.

One of the sporadic conspiracies among fanatical Moslems outraged by the government religious policies was reported in Southern Asia Minor on May 5, headed by the Kurdish sheikh Uzzeman Saidi. It was quickly suppressed and 30 conspirators were arrested. The police announced on October 17 that they had frustrated a plot against the life of Mustafa Kemal Pasha by arresting six Circassians and a member of the Grand National Assembly.

Foreign Relations. The expansion of Turkish armaments at great cost during 1935 was due largely to the threatening attitude of Italy, particularly in the Dodecanese Islands situated only 12 miles off the Turkish coast. Italy had long cast covetous eyes upon southern Anatolia as a field for expansion and the Turks feared that Mussolini was preparing for such an adventure, using the Dodecanese Islands as a base of operations. They were therefore relieved when Mussolini finally selected Ethiopia as his victim, but they did not slacken their defensive preparations. Italian troop movements and air activities led the Turks in November to mobilize part of their civilian reserves in the region opposite the Dodecanese group.

Believing that Turkey's future immunity from an Italian attack could be insured only through the development of the principle of collective security embodied in the League Covenant and the Balkan Pact, the Ankara Government fully supported the League in the application of economic and financial sanctions against Italy. The policy was widely approved in Turkey although Italy normally purchased about 20 per cent of all Turkey's exports. With the development of the Anglo-Italian crisis in September and October, Turkey was reported to have offered the British military and naval support, including the right to use Turkish harbors, in the event of war with Italy. In return the Turks asked a British pledge that the Italian Dodecanese Islands near the Turkish shore should be transferred to Turkey and that the others should be given to some other power. In December Turkey and the other members of the Balkan Entente (q.v.) formally agreed to go to Britain's aid in case of an Italian attack upon her arising from the application of League sanctions.

That Turkey took her pledges under the Balkan Pact seriously was shown during the Greek revolt in March. Bulgarian troop concentrations near the Greek frontier led Turkey to mobilize troops along the Turkish-Bulgarian border as a warning against Bulgarian intervention in Greek affairs. See *BULGARIA* and *GREECE* under *History*.

Turkey meanwhile continued to press Britain and the other signatories of the Lausanne Treaty of 1923 for the right to fortify the demilitarized zones along the Straits and the Turkish western frontiers. It was reported from London on December 23 that France had agreed to support the Turkish demand regarding the Straits. Turkey also continued actively to strengthen its under-

standings with the Soviet Union and with the neighboring Asiatic States. Three treaties of friendship and neutrality with the Soviet Union were renewed on November 7 at Ankara. It was reported that a pact of friendship and non-aggression had been concluded earlier in the year by Turkey, Iran, and Iraq, and that Turkey, Iran, and the Soviet Union had formed an entente cordiale that envisaged concerted action in case of a European crisis.

See *ETHIOPIA*, *GREAT BRITAIN*, *GREECE*, *IRAN*, *IRAQ*, *ITALY*, *RUMANIA*, and *YUGOSLAVIA* under *History*.

TURKMAN S.S.R. See *SOVIET CENTRAL ASIA*.
TURKS AND CAICOS ISLANDS. See under *JAMAICA*.

TUSKEGEE NORMAL AND INDUSTRIAL INSTITUTE. An institution for the vocational training of colored young men and women at Tuskegee Institute, Ala., founded in 1881 by Booker T. Washington. The enrollment for the term beginning September, 1935, was 1519. There were 210 members on the faculty. The endowment for the year ending May 31, 1935, was \$7,027,156; the income was \$387,484. The library contained 45,000 volumes. President, Fred D. Patterson, D.V.M., M.S., Ph.D.

TUTUILA. See *SAMOA*.

TWENTIETH CENTURY FUND. See *LABOR*; *UNIVERSITIES AND COLLEGES*.

UBANGI-SHARI. See *FRENCH EQUATORIAL AFRICA*.

UGANDA, ō-gan'dā or u-gan'da, **PROTECTORATE.** A British protectorate in East Africa. Area, 94,204 sq. miles; population (1931 census), 3,536,267 natives, 14,150 Asiatics, 2001 Europeans, and 1116 others. Chief towns: Entebbe (capital); Kampala, and Jinja.

Production and Trade. Cotton with an estimated output of 240,000 bales (of 400 lb.) for 1934-35, as compared with 285,642 bales for 1933-34, was the chief product. Coffee (7715 tons exported during 1934), sugar, groundnuts, simsim (seeds and oil), tobacco, rubber, tea, tin ore, gold, salt, hides, and skins were other products. Uganda and Kenya were a single unit for customs purposes and complete freedom of trade existed between them. In 1934, imports (ex-ship Mombasa) were valued at £1,751,051; domestic exports (f.o.b. value Mombasa), £3,773,766 of which cotton (lint and seed) accounted for £3,013,743; coffee, £293,313; sugar, £240,593.

Government. For 1934, revenue amounted to £1,527,672; expenditure, £1,330,561; public debt, £2,235,600. Budget estimates for 1935: revenue, £1,170,643; expenditure, £1,169,918. The functions of government were administered by a governor aided by an executive council and a legislative council. Native kings and chiefs, including some with rights regulated by treaty, were encouraged in carrying out the government of their own subjects. During November, 1935, Philip E. Mitchell succeeded Sir B. H. Bourdillon as Governor and Commander-in-Chief. See *KENYA* under *History*.

UKRAINIANS. See *POLAND* under *History*.

UKRAINIAN S.S.R. One of the seven constituent republics of the Union of Soviet Socialist Republics (q.v.). Area, including the Moldavian Autonomous S.S.R., 174,395 sq. miles; population (Jan. 1, 1933), 32,069,700 of whom 80 per cent were Ukrainians, 9.2 per cent Russians, and 5.2 per cent Jews. Chief towns: Kiev, the capital, 607,764 inhabitants; Kharkov, 742,000; Odessa, 442,980; Dnepropetrovsk, 378,000.

Production. The Ukraine was the most important grain producing area in the Soviet Union. In 1933 the area under cultivation amounted to 26,373,000 hectares (hectare = 2.47 acres). By 1934, 73.2 per cent of the peasant holdings had been collectivized. Coal, manganese ore, iron ore, steel, sugar, agricultural machinery, were important products. In 1933, industrial production was valued at 5,100,000,000 rubles (ruble was worth \$0.5146 in the U.S.S.R. during 1933), and 1,400,000 workers were employed.

ULCERS. See MEDICINE AND SURGERY.

ULSTER. See IRELAND, NORTHERN.

UNEMPLOYED YOUTH. See CHILD WELFARE.

UNEMPLOYMENT. The Social Security Act, signed by President Roosevelt on Aug. 14, 1935, included provisions establishing unemployment insurance, but hardly was the ink of the signature dry before objections to the plan were raised. The opposition was not confined to those who doubt the wisdom of any Federal measure in this field, preferring to leave the matter to the States as in the case of child labor, etc., but was also voiced by experts who favored a uniform national system. Under the present plan, it is predicted, a chaotic condition will rapidly develop and out of that chaos nothing of any great profit to the nation, the administrative officials or the unemployed, will come. The most pointed, and in many respects the most expert, criticism was that voiced by Abraham Epstein in *Harper's Magazine* for November, 1935. Mr. Epstein said, in part, that:

The unemployment insurance plan . . . disregards the advice of not only the [Committee on Economic Security] staff's chief expert on unemployment insurance and practically all students of the problem, but also that of the majority of the Advisory Council composed of such prominent employers as Messrs Swope and Teagle, labor leaders as William Green and George M. Harrison, and public leaders such as Frank P. Graham . . . Father John A. Ryan, and Helen Hall . . . Instead of providing for uniformity of standards, the Federal Act not only sets up no basic requirements for proper State Systems but goes out of its way to discourage this by inviting States to establish individual reserve funds and employment guarantee plans, thereby not only complicating the administration of the system but actually frustrating any hope of establishing an adequate system of unemployment insurance throughout the United States. Instead of national uniformity the present scheme will foster a miscellany of forty-nine divergent plans. . . .

However, the Federal authorities continued with their plans to put the prescribed scheme into operation in 1936, and the States began to respond to the suggestion that they institute plans of their own. Representatives of 39 States met in Washington on Dec. 14, 1935, to discuss all phases of the necessary cooperative action under the Act, and at that time it was announced that nine States had passed their own unemployment insurance acts, covering 33 per cent of the nation's payroll. The States referred to were New York, Wisconsin, Massachusetts, New Hampshire, California, Oregon, Washington, Alabama, and Utah. The lack of any basis for comparison among the laws passed is clearly indicated by a rapid review of the laws of these nine States, as discussed in the *Monthly Labor Review* for May (N. Y., Utah, Washington), July (New Hampshire), August (Calif.), and November (Ala., Mass.), but the differences are too intricate for analysis in a brief article of this character. The Wisconsin act, the first to be passed and the only one pre-dating the Federal Security Act, became compulsory on July 1, 1934, and began to pay benefits for unemployment originating on or after July 1, 1935. It is estimated that 3400 firms employing 300,000 workers are subject

to its provisions. About two-thirds of the employers subject have established exempt benefit plans, which are under State supervision, and since the act provides that the employers finance both it and an expanded scheme of public employment agencies, it is expected that the entire machinery will soon demonstrate its effectiveness, or lack of it. The first decisive step of the Federal authorities was taken on Dec. 20, 1935, when the Treasury authorities announced a decision as to payroll taxes as follows:

(a) Every person subject to tax under the act shall, during the calendar year 1936 or any calendar year thereafter, for each such calendar year, keep such permanent records as are necessary to establish:

(1) The total amount of remuneration payable to his employees in cash or in a medium other than cash, showing separately (a) total remuneration payable with respect to services excepted by Section 907c, (b) total remuneration payable with respect to services performed outside of the United States, (c) total remuneration payable with respect to all other services.

(2) The amount of contributions with respect to employment during the calendar year paid by him into any State unemployment fund, showing separately (a) payments made and not deducted (or deductible) from the remuneration of employees, (b) payments made and deducted (or deductible) from the remuneration of employees, (c) payments made with respect to services excepted by Section 907c.

OTHER INFORMATION REQUIRED

(3) Such other information as will enable the commissioner to determine whether such person is subject to the tax and, if subject to the tax, the amount thereof.

(b) No particular method of accounting or form of record is prescribed. Each person may adopt such records and such method of accounting as may best meet the requirements of his own business, provided that they clearly and accurately show the information required above and enable him to make a proper return on the prescribed form.

(c) Records are not required to show the number of individuals employed on any day, but must show the total amount of remuneration actually paid during each calendar month and the number of individuals employed during each calendar month or during each such lesser period as the employer may elect.

(d) Any person who employs individuals during any calendar year, but who considers that he is not an employer subject to the tax, should be prepared to establish by proper records (including, where necessary, records of the number of persons employed each day) that he is not an employer subject to the tax.

As the Act goes into operation, it is pertinent to recall certain observations made by the Committee on Social Security relative to the general scheme. In a release of Nov. 1, 1934, the Committee stated:

Unemployment insurance will not solve the problem of the business cycle. . . . It cannot prevent the depression, . . . will not directly benefit any group in society other than the wage-earners and salaried employees. This excludes the 20 per cent of our gainful workers who are farmers, merchants, professional men, and self-employed persons, . . . nearly all of the more than three million wage-earners employed in agriculture, forestry and fishing; the great majority of the four million five hundred thousand people who are employed in domestic and personal service; and also, the two million three hundred thousand "executive and professional" salaried employees . . . (It does not eliminate the necessity for relief or emergency employment.

Unemployment Statistics. The national figures for unemployment continue in a state of almost unmitigated chaos, and in some respects the situation was worsened in 1935. For several months on end the A.F. of L. did not issue figures at all but announced that it was revising its methods of making the estimates. Writing in the *New York Times* late in the year Henry Hazlitt correctedly stated that:

the present figures of unemployment—so often quoted with great confidence, as if the unemployed had been run through a turnstile and counted—are little better than guesswork.

Mr. Hazlitt pointed out that both of the outstanding estimates, those of the A.F. of L. and the Na-

tional Industrial Conference Board, are figured from the same base which was obtained from the Census of 1930 in which 3,188,000 persons were reported unemployed as of the month of April. Thereafter the estimates have diverged. While both sets agree that the peak of unemployment was reached in the bank-crisis month of March, 1933, the divergence began to expand after that date until in January, 1934, the Conference Board figures were 1,000,000 below the A.F. of L. totals. The fundamental trouble seems to be that large groups of workers are not adequately reported to any existing centre, including workers in agriculture, forestry, and fishing, together with professional men, self-employed persons, domestic workers, certain kinds of clerical workers, and workers in such branches of transportation as taxi-ing, trucking, etc. The opportunity for over- or under-estimation is obvious and, until a more adequate system of reporting is discovered, American figures on unemployment are of dubious validity.

A further complicating factor was injected into the picture when, on Dec. 4, 1935, Robert R. Nathan, formerly consultant on unemployment statistics to the Committee on Economic Security, and now with the Department of Labor, announced semi-official figures which differed from both the A.F. of L. and Conference Board totals. While agreeing that the peak came in March, 1933, Mr. Nathan's figure was larger than either current figure:

Unofficial figure for March, 1933	15,071,000
A F of L.	13,689,000
National Ind. Conf. Bd.	13,496,000

In early November, William Green announced that the revision in method used in calculating the A.F. of L. figures was complete and that the March, 1933, figure was now 15,470,000. For October, 1935, Mr. Green set a figure of 11,650,000 unemployed, while the Conference Board estimate was 9,196,000, bringing the divergence between these two estimates up to almost two and a half million individuals. Obviously this is chaos of the worst kind and demands that measures to establish a national reporting system of universally accepted validity be taken.

Foreign Unemployment Statistics. In most foreign countries far more valid figures are available and are used not only to gauge the state of employment but the prospective drain on unemployment reserves and the probable need for general relief. The latest available figures for the principal foreign nations which follow were abstracted from the meticulously detailed reports printed in the *Monthly Labor Review* for October, 1935:

Australia (June, 1935)	77,090
Austria (June, 1935)	238,133
Belgium (June, 1935)	250,647
France (June, 1935)	402,661
Germany (June, 1935)	1,876,579
Great Britain (June, 1935)	2,000,110
Italy (June, 1935)	638,100
Japan (March, 1935)	367,542
Poland (June, 1935)	366,949
Sweden (June, 1935)	59,572

It must be recalled, however, that even foreign figures have their deficiencies, especially in nations making "policy concealments," and certainly the comparative significance of the totals is difficult to determine.

Legislation in foreign countries dealing with un-

employment during the year included the establishment in Great Britain of a new system for the handling of unemployed insured persons who had exhausted their benefits under the insurance scheme; the establishment of a compulsory insurance scheme in Canada (passed June 28, 1935); and the establishment of labor camps in the national forests of France.

UNFEDERATED MALAY STATES. The five States (see below) of the Malay Peninsula which were under British protection but were not included in the Federated Malay States.

Johore. Area, 7500 sq. miles; population (1934), 617,340. Capital, Johore Bahru. Rubber, pineapples, copra, iron, tin, timber, areca nuts, and tapioca were the main products. In 1934, imports were valued at \$31,213,739; exports, \$51,077,703; revenue, \$16,660,594; expenditure, \$11,692,115 (Straits \$ averaged \$0.5901 for 1934; \$0.5717 for 1935).

Kedah. Area, 3648 sq. miles; population (1934), 465,270. Capital, Alor Star. Rubber, coconuts, and betel nuts were the main products. In 1934, imports were valued at \$39,333,884; exports, \$27,650,670. For 1934-35, revenue amounted to \$6,711,272; expenditure, \$5,314,856.

Kelantan, kē-lan'tan'. Area, 5713 sq. miles; population (1931 census), 369,411. Capital, Kota Bharu. Rubber, copra, betel nuts, manganese ore, gold, fish, and rice were the principal products. In 1934, imports were valued at \$5,171,181; exports (including reexports), \$5,576,086; revenue, \$2,220,769; expenditure, \$1,710,790.

Perlis. Area, 316 sq. miles; population, 49,300. Capital, Kangar. Rice and tin ore were the main products. For 1934-35, revenue amounted to \$358,382; expenditure, \$487,130.

Trengganu, trēng-ga'nō. Area, 5080 sq. miles; population (1934), 189,161. Capital, Kuala Trengganu (13,953 inhabitants in 1931). During 1934, there were 6330 births and 4590 deaths. Rice, coconuts, rubber, areca nuts, fish, iron, tin, and manganese were the main products. In 1934, imports were valued at \$3,460,829; exports, \$6,580,970; revenue, \$1,699,319; expenditure, \$1,405,157.

UNION COLLEGE. A nonsectarian college for men at Schenectady, N. Y., founded in 1795. The enrollment for the autumn of 1935 totaled 785. The faculty numbered 73. The amount of endowment for the year was \$4,113,000, and the income, \$467,683. The library contained 90,000 volumes. Hale House, containing a dining hall, and student and faculty lounges, was opened. President, Dixon Ryan Fox, Ph.D.

UNION OF SOUTH AFRICA. See SOUTH AFRICA, UNION OF.

UNION OF SOVIET SOCIALIST REPUBLICS (U.S.S.R.). A republic comprising the greater part of the former Russian Empire. Capital, Moscow.

Area and Population. The area of the Union of Soviet Socialist Republics is 8,199,258 square miles, of which 21.6 per cent lies in Europe, 78.4 per cent in Asia. The population Jan. 1, 1934, was estimated at 168,000,000. It was 147,013,600 by the census of December, 1926, and 139,700,000 in the same territory in 1914. The census of 1926 gave 71,024,300 males and 75,989,300 females.

The Union in 1935 was composed of 7 constituent republics, which in turn included 18 autonomous republics and 16 autonomous areas. The Russian Socialist Federated Soviet Republic contained 93 per cent of the area and 69 per cent of the popula-

tion of the country. The estimated area and population of the seven constituent republics as of Jan. 1, 1933, is shown in the following table.

Republic	Sq. miles	Population
R. S. F. S. R.	7,606,902	113,991,100
White Russian S. S. R.	48,945	5,439,400
Ukrainian S. S. R.	174,395	32,069,700
Uzbek S. S. R.	66,392	4,928,400
Transcaucasian S. F. S. R.	71,641	6,888,300
Turkmen S. S. R.	171,229	1,182,200
Tajik S. S. R.	55,545	1,182,100
Total	8,195,049	165,681,200

Cities of over 250,000 by official estimate of Jan. 1, 1933: Moscow, 3,663,000; Leningrad, 2,776,400; Baku, 709,500; Kharkov, 654,300; Kiev, 538,600; Rostov-on-Don, 517,600; Odessa, 497,000; Tashkent, 491,000; Sverdlovsk, 462,000; Gorky (Nizhni-Novgorod), 459,200; Tiflis, 405,000; Stalingrad, 404,000; Dnepropetrovsk, 379,200; Saratov, 338,000; Novosibirsk, 287,000; Stalin (Yuzovo), 273,900; Perm, 269,400; Samara, 260,000; Kazan, 258,700.

Education. Public education in the Soviet Union made great strides after the revolution. Universal compulsory education covering a three-year period was put in operation in 1930, and was later extended to seven years. Adult education was the object of great attention by the authorities and thousands of schools for illiterates have taught as many as 10,000,000 adults annually. The number of children in elementary and secondary schools in 1935 was nearly 26,000,000, more than three times the number before the revolution. In addition there were 10,000,000 children in kindergartens. Expenditures for education increased from 1,493,000,000 rubles in 1929 to 11,100,000,000 rubles in 1935. As a result of this great effort illiteracy, which embraced 67 to 70 per cent of the population in 1914, was reduced to 8 per cent.

The growth of higher education was also rapid. In 1934 there were upwards of 500,000 students in colleges and nearly 1,500,000 more in technicums and workers' faculties. Education in the Soviet Union is a charge against each of the seven constituent republics and against the localities concerned.

Production, etc. In the Soviet Union transport and communications are conducted as Federal departments. Banking is centralized in a State Bank under governmental control. Distribution is socialized, with stores conducted by local administrative bodies rapidly replacing those run by the cooperatives and by individual factories. Industrial production is carried on largely by state enterprises, operating under the general direction of appropriate Commissariats or government departments. A State Planning Commission (Gosplan) plots the objectives for each year and for five-year periods. A Council of Labor and Defense acts as a coordinative and standardizing body. A Commission of Soviet Control checks and supervises results.

State planning is an essential of Soviet economy. The planning system is designed to direct and coordinate the employment of the energies and resources of the country for orderly development. The planning system, however, goes beyond the economic field. It includes science, education, public health, and the extensive social services designed to safeguard the welfare and security of the citizenship.

Under this system the work of Gosplan has assumed a position of primary importance. Its personnel in Moscow includes a considerable number

of permanent specialists reinforced by consultants who are authorities in every field. Under the central body each Constituent Republic has its Gosplan, and there are subordinate planning boards in the various cities.

The first Five-Year Plan was completed Dec. 31, 1932, in four and a half years. Under it the industrial output was increased 119 per cent, and substantial bases in heavy industry were established. In agriculture the whole set-up was recast and in 80 per cent of the agricultural area the small individual strip-farms were replaced by large-scale collective farms, in most cases with a high degree of mechanization. In addition 10 per cent of the total farm area was represented by state farms mechanized in all departments and run on industrial lines.

The second Five-Year Plan was inaugurated Jan. 1, 1933. It envisages an increase of 114 per cent in industrial production, production goods to increase by 97 per cent and consumption goods by 134 per cent.

In agriculture the sown area is to be increased by 5 per cent, but more intensive methods of cultivation are expected to increase the crops by one-third. Tractors in use will increase to 400,000 by 1937. Capital investments for the period are fixed at 130.4 billion rubles (they were 50.5 billion rubles under the first Plan). New rail lines to be built will aggregate 12,000 kilometers and inland water transport will be greatly extended.

Industry. The year 1935 showed broad advances in industry, with the planned schedules surpassed all along the line. The output of heavy industry was 107 per cent of the plan for the year, that of light industry 102 per cent, of the lumber industry 103 per cent and of the food industry 111.5 per cent. Industrial production generally increased 20.4 per cent over that of 1934. In 1934 the advance was 19 per cent.

The output of key indicators in Soviet industry for 1935, with comparative figures for 1934 and for the fiscal year 1927-28 (the year preceding the beginning of the first Five-Year Plan), follows:

SOVIET INDUSTRIAL PRODUCTION

	1935	1934	1927-28
Coal met tons	106,660,000	93,500,000	35,400,000
Oil do...	23,110,000	24,100,000	11,600,000
Pig iron do...	12,480,000	10,400,000	3,280,000
Steel ingots do...	12,420,000	9,600,000	3,370,000
Motor vehicles units..	96,059	72,459	680
Tractors do ..	111,400	90,729	1,490
Power output 1,000 kwh.	25,800,000	19,500,000	5,003,000

Agriculture. Since 1928 the structure of agriculture has been completely reorganized. The small, individual peasant holdings, averaging from 12 to 14 acres, have in large measure given way to large-scale collective farms in which the peasants pool their plots. This new set-up has made possible better organized methods of production with a high degree of mechanization. During the first years of this transition period progress was difficult, but beginning with 1933 the new methods demonstrated their worth in a series of bumper harvests.

PRINCIPAL INDUSTRIAL CROPS

	1933	1934
Cotton (unginned) met. tons	1,320,000	1,320,000
Sugar beets do...	9,000,000	11,360,000
Flax (long fibre) do...	560,000	530,000
Sunflower seeds do...	2,350,000	2,080,000
Tobacco do...	79,000	57,000

Gross grain crops (in thousands of metric tons) were: 1913, 80,100; 1930, 83,540; 1931, 69,480; 1932, 69,870; 1933, 89,802; 1934, 89,400; 1935, 90,200. Grain exports (in metric tons) were: 1909-13 (average), 10,700,000; 1931, 5,050,306; 1932, 1,763,298; 1933, 1,689,790; 1934, 771,096.

The backbone of mechanization in Soviet agriculture is furnished by the machine and tractor stations, each of which serves collective farms within its area. These stations grew from 145 in 1930 to 4128 in 1935. They operated about two-thirds of the tractors in the country. The growth of mechanization on the farms is shown in the accompanying table.

GROWTH OF MECHANIZATION ON FARMS

Year	Tractors	Combines	Year	Tractors	Combines
1913	128	.....	1933	204,100	25,000
1929	34,900	45	1934	281,000	33,000
1931	125,300	6,400	1935	349,500	48,000

Labor. Membership in labor organizations in 1935 was 19,000,000 out of a total of 23,000,000 employed workers. In 1928 the total membership was 10,800,000. The spread of industry had created conditions of full employment since 1930. Industry was operated on the basis of a five-day week with a uniform rest day on the sixth day. The seven-hour workday was generally established. An elaborate system of social insurance provided allowances for sickness, disability, old age, and death, and furnished medical care and hospitalization as needed. Annual vacations with pay of at least a fortnight for all workers were compulsory.

Electrification. Up to the time of the revolution Russia was one of the most backward countries in power development. In 1935 the country was linked together by a series of over 50 large-scale regional power plants, reinforced by a steadily growing number of local plants. The largest of the enterprises was the Dnieproges station with an ultimate capacity of 558,000 kw. The total plant capacity rose from 1,874,000 kw in 1928 to 6,143,000 kw in 1934. Output rose from 5 billion kw-hr in 1928 to 20.5 billion kw-hr in 1934 and reached 25.8 billion kw-hr in 1935. The schedule of the second Five-Year Plan called for an output of 38 billion kw-hr in 1937, about 20 times the power provided in 1913.

Transportation. Great gains in transportation, in the development of rail, water, and air lines, were in progress in 1935. The new rail projects included a new northern Trans-Siberian line to run from the Baltic Sea to the mouth of the Amur River. During the preceding few years double-tracking of the old Trans-Siberian Railway had been virtually completed. A section from Chita, near Lake Baikal, to Khabarovsk (1365 miles) was finished in 1935. During the second Five-Year Plan 18,700,000,000 rubles were to be expended on railroad development and 7000 miles of new lines were scheduled to be placed in operation.

Railway mileage in 1934 was 51,700, about 45 per cent greater than in 1913. The rapid industrialization put a great strain on existing facilities and of recent years the railroads have been a bottleneck problem in the economic picture. The new Railway Commissar, L. M. Kaganovich, appointed early in 1935, brought about a marked improvement. Under his energetic administration daily freight car loadings increased from 55,282 in the first quarter to 75,241 in December. Freight operations in 1934 were 202 million ton-kilometers. Length of Soviet air lines in 1934 was 29,200 miles. The lines carried 65,000 passengers and 7200 metric

tons of mail and freight. Tsarist Russia had only 15,000 miles of roads, of which about one-fifth was paved. In 1934 there were 879,957 miles of roadway, of which 154,000 miles represented main highways and the remainder local roads.

Potential length of inland waterways in the Soviet Union is over 350,000 kilometers, of which 85,000 kilometers were navigable in 1935. The navigable chain was to be expanded to 101,000 kilometers by the end of 1937. The new extensions include a canal connecting Moscow with the upper reaches of the Volga. Another link would connect with the Baltic Sea, making Moscow a seaport for moderate sized vessels. Preliminary work was begun on a canal linking the Volga and the Don rivers—giving the Volga an outlet on the Black Sea—and on an extensive river-canal chain providing a continuous waterway between the Southern Urals and the Kuznets coal basin in West Siberia. During the first Five-Year Plan a waterway connecting the Baltic and White Seas was completed and the Dnieper River was made navigable to its upper reaches by a canal around the rapids at the Dnieproges dam. Freight carried in inland waterways in 1935 was 72,600,000 metric tons, compared with 39,900,000 metric tons in 1928.

Shipping. The Soviet merchant fleet was increased from 327,000 tons in 1928 to 1,350,000 tons in 1935. Further substantial increases were planned for 1936, both in new ships built in domestic yards and in ships purchased abroad.

Commerce. Soviet foreign trade, which held up well during the first two years of the world depression, showed a marked decline beginning late in 1931, though the decline was substantially checked in the late months of 1935. Figures for recent years are shown in the accompanying table in gold rubles (par value of gold ruble was \$0.8713 during 1935).

SOVIET FOREIGN TRADE
[Gold rubles]

Year	Exports	Imports	Total
1928	799,800,000	945,500,000	1,723,300,000
1931	811,200,000	1,105,000,000	1,916,200,000
1932	563,900,000	698,700,000	1,262,600,000
1933	495,700,000	348,200,000	843,900,000
1934	418,300,000	232,400,000	650,700,000
1935	367,400,000	241,400,000	608,800,000

Exports of gold are not included in Soviet customs figures. Gold production has been greatly increased during the past few years. While no official figures were available, the output in 1935 was estimated at \$170,000,000 to \$200,000,000 and exports were considerable. The principal Soviet exports in 1934 were: Lumber, 89,297,000 rubles; oil products, 59,611,000 rubles; furs, 32,267,000 rubles; grain and flour, 24,829,000 rubles; cotton fabrics, 23,249,000 rubles; flax and hemp, 20,838,000 rubles.

Principal imports were: Industrial machinery and equipment, 39,231,000 rubles; iron and steel, 25,992,000 rubles; non-ferrous metals, 21,825,000; iron and steel articles, 17,217,000; crude rubber, 16,488,000; wool, 11,840,000. The principal countries taking Soviet exports in 1934 were: Germany, 23.5 per cent; Great Britain, 16.5 per cent; Mongolia, 10.7 per cent; the Netherlands, 5.3 per cent; France, 5.2 per cent. Principal countries furnishing Soviet imports in 1934 were: Great Britain, 19.9 per cent; Germany, 12.4 per cent; Mongolia, 8.9 per cent; United States, 7.7 per cent; the Netherlands, 6.8 per cent.

Trade between the Soviet Union and the United States reached a peak figure of \$138,200,000 in 1930, of which upwards of four-fifths represented

American exports. During the next three years the commerce suffered a decline of 85 per cent owing to the establishment of better trade and credit conditions by the Soviet Union in other countries. The impasse in Soviet-American trade continued until the signing of a one-year trade agreement between the two countries in July, 1935, whereby the United States extended most-favored nation treatment to the Soviet Union and the Soviet Union agreed to double its purchases.

At the close of 1935 the Amtorg Trading Corporation, official trading organization for the U.S.S.R. in the United States, announced that Soviet purchases for the year had been \$42,000,000, nearly three times the total of \$14,500,000 for 1934. (Purchases are of course not immediately reflected in export figures.) The principal items were \$27,159,000 for industrial equipment and \$8,000,000 for cotton. The remainder went largely for airplane and automotive apparatus. Principal American imports from the Soviet Union are furs, anthracite, manganese ore, sausage casings, and flax.

SOVIET-AMERICAN TRADE, 1925-35

Year	American exports to U.S.S.R.	American imports from U.S.S.R.	Total
1925	\$ 68,900,000	\$13,200,000	\$ 82,100,000
1926	48,900,000	14,100,000	64,000,000
1927	64,900,000	12,800,000	77,700,000
1928	74,100,000	14,000,000	88,100,000
1929	84,700,000	22,500,000	107,200,000
1930	114,356,000	23,839,000	138,195,000
1931	103,669,000	13,206,000	116,875,000
1932	12,600,000	9,600,000	22,200,000
1933	8,972,000	12,120,000	21,092,000
1934	14,997,308	12,337,647	27,335,355
1935	24,738,625	17,736,312	42,474,937

The Budget. In a country with such a high degree of socialization as the Soviet Union, the growth of the budget reflects to a large extent the degree of economic progress. The first "firm" budget, that of 1924-25, balanced at 1,400,000,000 rubles. The budget for 1934 envisaged revenues of 65,900,551,000 rubles and expenditures of 65,400,551,000 rubles. About 85 per cent of the budgetary revenues are now derived from the "socialized sector." The budget structure for 1935 is shown in the next column.

Government. A description of the constitution of the Union of Soviet Socialist Republics will be found in the NEW INTERNATIONAL YEAR BOOK for 1923. In January, 1936, the Council of People's Commissars (executive cabinet of the Government) was composed as follows: Chairman of the Council, V. M. Molotov; Vice-Chairmen, J. E. Rudzutak, V. Y. Chubar, A. A. Andreyev, and V. I. Mezhlauk; Commissar for Foreign Affairs, M. M. Litvinov; Defense, K. E. Voroshilov; Internal Supply, I. Y. Veitzer; Foreign Trade, A. Rosengoltz; Transportation, L. M. Kaganovich; Water Transportation, N. I. Pakhomov; Communications, A. I. Rykov; Finance, G. T. Grinko; Heavy Industry, G. K. Ordjonikidze; Light Industry, I. E. Liubimov; Lumber Industry, S. S. Lubov; Food Industry, A. I. Mikoyan; Agriculture, M. A. Chernov; State Farms, M. I. Kalmanovich; Chairman State Planning Commission, V. I. Mezhlauk; Chairman Commission of Soviet Control, J. E. Rudzutak; Internal Affairs, G. G. Yagoda.

Chairmen of the Central Executive Committee of U.S.S.R. (chosen by the Congress of Soviets): M. I. Kalinin, G. I. Petrovsky, A. G. Chervyakov, Ganzanfar Mussabekov, Netyrbay Aitakov; Faisulla Khodzhayev and A. Rakhimbayev.

SOVIET BUDGET FOR 1935

Revenues

	(1,000 rubles)
Socialized sector:	
Turnover tax	52,025,700
Deductions from profits	1,725,741
Income tax from State and cooperative enterprises	699,150
State, social, and health insurance	1,758,360
Interest, etc.	881,300
Total socialized sector	57,090,251
Revenue from the population:	
Loans	3,550,000
Taxes	2,182,750
Total from population	5,732,750
Other income (including revaluation of raw materials)	3,077,550
Grand total	65,900,551

Expenditures

Investments in national economy	35,156,891
Education, health, and public welfare *	4,804,312
National defense	6,500,000
Commissariat for Home Affairs	1,652,500
Administration	886,156
Advances for local budgets	8,977,256
Government reserve	1,962,500
Miscellaneous	5,460,936
Total	65,400,551
Excess revenue over expenditure	500,000
Grand total	65,900,551

* Expenditures for these purposes are in greater part local and do not show on the federal budget.

Budgetary receipts and expenditures during 1931-34, in millions of rubles, were:

	1931	1932	1933	1934
Receipts	23,760	30,490	39,200	49,760
Expenditures	23,070	30,160	36,000	46,950

Joseph Stalin, General Secretary of the Communist Party of the U.S.S.R., while holding no governmental office beyond membership in the Central Executive Committee, was the most powerful political figure in the country.

HISTORY

Internal Development. "We are now on the path to a well-to-do life," declared Joseph Stalin toward the close of the year 1935. The optimistic phrase was apparently not without justification. At the time Stalin spoke the daily output in key indicators of production was showing the following advances as compared with the daily output of December, 1925: Electric power 1700 per cent; coal, 540 per cent; iron ore, 1060 per cent; pig iron, 700 per cent; steel, 560 per cent. The food industry completed its production schedules for the year in less than 11 months—heavy industry by December 14, light industry by December 24.

In agriculture the Soviet Union in 1935 harvested its third successive bumper crop, setting a new grain record in Russian history. The collective farm system had demonstrated its success and by the close of the year over 90 per cent of the peasants had pooled their holdings in the collectives. With these gains the system of supply and distribution, completely reorganized in 1934, was operating with increasing efficiency, and the railway system, for years the bottle-neck retarding the whole scheme of production and supply, was at last catching up with its tasks.

These various fulfillments were accompanied by signs of increased well-being. Prices of necessities,

especially foodstuffs, dropped steadily and sharply throughout 1935, as supplies grew abundant. The card ration system of preceding years, which was abolished for bread, flour, and cereals January 1, was wiped out for other food necessities in October. The human queues waiting before foodshops during former years disappeared. Visitors returning to the Soviet Union noted that the population was better clothed, and a number of the cities began to stage fashion shows. Substantial beginnings were made in the complete rebuilding of Moscow as a modern socialist city. The first nine-mile section of Moscow's subway was opened early in 1935.

An important factor in the general economic advance of 1935 was the phenomenon of Stakhanovism. This peculiarly Russian form of rationalization of the working process, involving both a better distribution of tasks and a more efficient use of tools, stemmed from the initiative of a young coal cutter of the Donetz Basin, Alexei Stakhanov, who persuaded his superiors to let him, with his assistants, try out a new method. At the end of a six-hour shift, by cooperating their special skills, Stakhanov and his three collaborators were able to show a five-fold increase in their normal coal output. The method spread through the coal mines, with new "norms" being constantly established, and it soon began to be adapted to other industries and even to agriculture.

The abundant production along with the steady decline in commodity prices and the institution of a simplified single-price market system, led the authorities to announce, late in 1935, a new stabilization of the paper ruble, effective Feb. 1, 1936. Other factors in this move were the favorable foreign trade balance, amounting to an export surplus of nearly \$400,000,000 in the past three years; the tripling of Soviet gold production under the second Five-Year Plan; the rise of the gold fund of the State Bank to some \$850,000,000, and the reduction of Soviet foreign trade obligations to a little over \$100,000,000.

The steady increase in the buying power of the ruble was one of the major events in Soviet life during 1935. The new stabilized rate of the ruble was five to the dollar. The rate on the illegal exchanges during the transition years fell as low as 30 or more to the dollar.

The easier economic picture was accompanied by a period of added political ease. Not only was the year 1935 a tranquil one in Soviet politics, but it was a year marked by certain fundamental constitutional changes of a democratic character.

At the meeting of the Seventh All-Union Congress of Soviets in February the delegates voted to amend the Constitution to provide important changes in the representative system. Hitherto voting for delegates to the All-Union Congress was indirect. The representatives were elected by provincial congresses and by city soviets. Because of the backwardness of the rural population, the representation was heavily weighted in favor of the urban centres. There was no secret ballot. The new amendments provide for direct and secret voting, with equal representation on the basis of population for all districts. The changes were made possible by the rapid rise of literacy in the villages and by the transformation of rural economy from individualistic forms to a predominantly collectivistic system of life.

An event of great historical importance in 1935 was the successful opening of the Northeast Passage to navigation. This event was the culmination of over a decade of strenuous and daring effort

(see YEAR BOOK for 1934, p. 704). During recent years the Soviet Government has established 77 stations manned by 589 scientists and technicians, equipped with radio and with apparatus for meteorological, aerological and hydrological study, along its 300-mile Arctic Coastline. Ice-breakers have been stationed at difficult navigation points to furnish aid for merchant vessels. Last summer two merchant vessels were started from Murmansk, 700 miles north of Leningrad, bound for Vladivostok, and two others started from Vladivostok for Murmansk. All four vessels completed the 6000-mile voyage in less than three months. See POLAR RESEARCH.

Foreign Relations. The Soviet foreign outlook during 1935 was largely dominated by the increasing menace of aggression on both the western and eastern frontiers. In the west the principal factors were German rearmament and the general European tension resulting from the Italian invasion of Ethiopia. In the east the main causes of uneasiness were the resumption of Japanese aggression in North China and the increasing pressure brought jointly by Japan and Manchoukuo against Mongolia. The fact that Outer Mongolia had established a government on the Soviet model which maintained relations of friendly intimacy with the Soviet Union added to the tension in respect to that section. See CHINA, JAPAN, MANCHOUKUO, and MONGOLIA under *History*.

Under these circumstances it was not surprising that the Government, on the occasion of the meeting of the Central Executive Committee (Congress) in January, 1936, announced greatly increased expenditures for national defense. While 6.5 billion rubles had been allotted for the army and navy in the budget for 1935, it was revealed that 8 billion rubles had been spent, and the army-navy budget figures for 1936 were fixed at 14.8 billion rubles. At the same time it was announced that the army had been increased during 1935 from 960,000 to 1,300,000, that the number of submarines had been quintupled during the past few years (no totals given), that the facilities for turning out large-scale, long-range bombing planes in Soviet plants had been greatly increased, and that plans were in operation for rebuilding the Soviet navy on modern lines.

Pledged to the policy of collective security against the menace of war, the Soviet Government during 1935 continued its policy of cooperating to preserve peace through the League of Nations—which it joined in September, 1934—and in line with this policy it supported the League programme of enforcing punitive sanctions against Italy (q.v.).

A treaty was signed with France May 2, 1935, providing for mutual assistance in case of an attack upon either by a third power. Up to the end of December, 1935, this treaty had not been submitted to the French parliament for ratification. On May 16, 1935, a similar treaty was concluded with Czechoslovakia. Subsequently, June 3, a new trade treaty was concluded with Czechoslovakia, which provided for a trade loan by that country for 250,000,000 kronen to run for five years at 6 per cent. In April a new trade agreement was concluded with Germany, providing for German financial trade credits of 200,000,000 marks on a five-year basis, to apply against Soviet purchases.

In the Far Eastern sector the sale of the Soviet-owned Chinese Eastern Railway to the State of Manchoukuo was concluded in Tokyo Mar. 28, 1935, after nearly two years of negotiations. The

terms included the payment of 140,000,000 Japanese yen, one-third in cash, the remainder in goods, payments to run over three years. The sale of the road removed a focus of major irritation in that area. However, disturbing incidents along the Soviet-Manchoukuoan border continued during the year.

Though no progress was made in the debt and claim negotiations between the United States and the U.S.S.R. during 1935, a trade agreement was concluded between the two countries in July to run for one year. Under the agreement the U.S.S.R. was to receive most favored nation treatment in respect to certain reciprocal trade treaties in course of conclusion by the United States with other countries. Reciprocally the Soviet Government obligated itself to double its purchases in the United States during the year.

The Seventh Congress of the Third International, held in Moscow during the summer of 1935, evoked a note of protest from Washington to the Soviet Government. The Congress, the first held in seven years, marked a distinct change in policy of the International, as it indorsed a programme to have Communist parties in various countries line up with liberal and democratic groups to combat Fascist tendencies. However, the American State Department protested against certain statements made by American delegates at the Congress and took the view that the proceedings were in violation of the "non-propaganda" agreement signed by Maxim Litvinov, Soviet Commissar for Foreign Affairs, at the time of recognition. The Soviet Government replied that it had no jurisdiction over proceedings of the Communist International. Secretary Hull, in a public statement, thereafter recapitulated the American Government's point of view. There were no further exchanges. See COMMUNISM; CZECHOSLOVAKIA, FINLAND, FRANCE, GERMANY, HUNGARY, POLAND, RUMANIA, TURKEY, and URUGUAY under *History*.

UNITARIAN CHURCH. A denomination of independent congregational churches voluntarily uniting themselves together for more efficient religious work. The purpose of the American Unitarian Association, which is the executive arm of the denomination, is:

To diffuse the knowledge and promote the interests of pure religion which, in accordance with the teaching of Jesus, is summed up in love to God and love to man.
To encourage sympathy and cooperation among religious liberals.

And to strengthen the churches which unite in the Association for more and better work for the Kingdom of God.

The Association recognizes that its constituency is congregational in tradition and polity, and that nothing in these by-laws is to be construed as an authoritative test.

The one hundred and tenth annual meeting of the American Unitarian Association was held in Boston, Mass., May 21, 1935. According to the statistics available for 1935-36, the denomination had 389 churches; 130,045 members; 2873 Sunday school officers and teachers, and 17,629 pupils. The denominational publication is *The Christian Register*, a weekly. The officers of the Association for 1935 were: President, the Rev. Louis C. Cornish, D.D.; secretary, the Rev. Walter R. Hunt, D.D.; treasurer, Parker E. Marean. Headquarters, 25 Beacon Street, Boston, Mass. See FREE CHURCH FELLOWSHIP.

UNITED BRETHREN IN CHRIST, CHURCH OF THE. A denomination which resulted from the religious awakening of Philip William Otterbein, a German Reformed pastor, and Martin Boehm, a Mennonite preacher, and was formally

organized in Frederick County, Md., in 1800. The church is divided into 33 annual conferences, including those in China, Japan, the Philippines, Puerto Rico, and West Africa. In 1935 there were 1659 charges, 2983 organized churches, 1808 active ministers, 424,885 church members, 2838 Sunday schools with an enrollment of 426,499, including teachers and officers. The amount raised by the church for all purposes in 1935 was \$4,321,713.

The more important educational institutions maintained by the church are Lebanon Valley College in Annville, Pa., and Otterbein College in Westerville, Ohio. The official paper is the *Religious Telescope*. The *Watchword* is the young people's paper. Headquarters are in Dayton, Ohio.

UNITED STATES. Area and Population. The area of the 48 States and the District of Columbia (1930) was 3,026,789 square miles, exclusive of areas of open sea within the nation's jurisdiction, and of the Great Lakes. Non-contiguous lands under the authority of the United States (Alaska, Hawaii, the Philippine Islands, the Panama Canal Zone, Puerto Rico, Guam, the Virgin Islands, and American Samoa) had an aggregate area of 711,606 square miles. The aggregate area of the Union and these outlying lands was 3,738,395 square miles.

The population of the 48 States and the District of Columbia in 1930 (Fifteenth Census) was 122,775,046; in 1920 it had been 105,710,620. The Bureau of the Census estimated the total as of July 1, 1935, at 127,521,000, compared with 126,425,000 on July 1, 1934. That of the outlying territories and other lands under the Federal authority (1930 in general, but 1929 for the Philippines) was 14,233,389. (See article on each State, territory, or possession, for its population.)

Agriculture. See AGRICULTURE; AGRICULTURE, U.S. DEPARTMENT OF; sections on *Agriculture* under the various States; and articles on CORN, WHEAT, ETC.

Commerce. A moderate improvement in the year's volume of domestic commerce over that of 1934 appeared in 1935's total loadings of freight cars (31,518,372), which exceeded the total for 1934 by some 2.2 per cent. With regard to the manufacturing industries, evidence of growing activity appeared in the Labor Bureau's estimates of the monthly percentage of the normal level of employment (the years 1923-25 being taken as the norm); the percentage rose to 85.3 for November, 1935, from 78.4 for November, 1934, the gain being nearly 9 per cent of the latter figure. The year's production of electricity, indicative of commercial and industrial as well as other activities, was estimated at 92,500,000,000 kw-hr, an excess of some 9 per cent over the total for 1934. The daily clearances of banks in 25 leading cities averaged some 9 per cent ahead of corresponding dates for 1934, for the first half of 1935, and some 21 per cent ahead for the second half; they reflected heavy governmental and financial payments as well as commercial activity. The year 1935 offered this contrast to its predecessor, that during this second half (or from within a few weeks after the Supreme Court's invalidating the NRA) the chief improvement occurred, whereas in 1934 a recession followed the midyear. The course of commercial prices in 1935 was mainly firm, though greater harvests reduced the prices of some crops materially.

Foreign trade was marked by a sharp rise in exports during the last quarter and a consistent increase of the monthly imports over the cor-

responding figures for 1934. The year's excess of exports was less than half that for 1934. The monthly and yearly totals appear in the accompanying table.

IMPORTS AND EXPORTS BY MONTHS
[In thousands of dollars]

Month	Imports		Exports	
	1935	1934	1935	1934
January	\$166,832	\$135,706	\$176,223	\$172,220
February	152,491	132,753	162,999	162,752
March	177,356	158,105	185,064	190,938
April	170,500	146,523	164,127	179,427
May	170,533	154,647	165,456	160,197
June	156,754	136,109	170,244	170,519
July	177,354	127,229	173,181	161,672
August	169,030	119,513	172,183	171,984
September	161,649	131,658	198,264	191,313
October	189,265	129,635	221,235	206,413
November	169,385	150,919	269,310	194,712
December	186,648	132,258	223,737	170,654
Total	\$2,047,797	\$1,655,055	\$2,282,023	\$2,132,800

Mineral Production. The article **METALS AND MINERALS** gives the latest available official figures for mineral production in the United States. The more important minerals mined in the United States are treated in separate articles. There are also paragraphs on mineral production in the articles on the individual States.

Railways. See separate article on **RAILWAYS**.

Shipping. See articles on **SHIPPING** and **SHIP-BUILDING**.

Finance. See article on **PUBLIC FINANCE**.

Education. See the articles **EDUCATION IN THE UNITED STATES** and **UNIVERSITIES AND COLLEGES**. Separate articles on the most important universities and colleges also are given under their respective titles. Sections on education are included in the articles on the several States.

ADMINISTRATION

General Situation and Policies. The statutory foundations of the Administration's newly reared mechanism for the direction of the country's economic welfare was shattered in places, shaken in others, by adverse decisions of the Supreme Court and lower Federal courts. This reverse diminished the prestige that the Administration had won and held by nearly two years of rapid, sweeping, and previously irresistible innovation.

The laws devaluing currency, monopolizing gold, and eliminating the stipulation of gold value from contracts of debt were, however, in great measure affirmed by the Supreme Court. Its denial of the power of Congress to abrogate the Government's own prior pledge of its faith and credit was offset by its denial of obvious practical recourse at law for the Government's creditors. Uncertainties as to the status of money and debts were circumscribed; one grave impediment to new commitments was thus removed.

Industry and commerce made fairly continuous improvement in many lines after March and, particularly, after the Supreme Court's demolition of the NRA in May. But the hopes of a broad general return to the pre-depression level of activity was still deferred: the Federal Government had to continue, throughout the year, supporting millions of people who would formerly have gained livelihoods through the natural activity of their trades. The Federal billions, passing from these people's pockets into commerce, gave an abnormal lift to business.

The public temper grew more diverse. Most farmers remained satisfied with subventions from the AAA and with the limitation of cultivation;

yet cotton-growers in Texas and tenant farmers in Arkansas became dissatisfied. Popular disappointment at the Supreme Court's overthrowing some of the features of the "new deal" bred sympathy for more radical proposals of political change. The destitute dependents on Federal support were disposed to ask for more. Resentment of artificially high prices for foods began to appear in some places. Labor unions were alarmed and angered by the overthrow of the NRA; for though they had fought some of its features they wanted to keep and strengthen the opportunity it gave them to deal with employers.

Developments in Policy. Deference to a growing demand for the redistribution of wealth prompted the President to call on Congress to apply to great fortunes such heavy taxation as would tend to use them gradually up. He obtained for the labor unions the enactment of a law that granted them a stronger position in collective bargaining than the National Recovery Act had afforded. He made the passage of provision for Federal grants toward pensions to the elderly and insurance against unemployment cardinal points of his social policy; likewise, a measure to break up the great holding companies that dominated the field of the electric and of other public utilities.

In administrative matters the Administration adopted the course of shifting the destitute from the receipt of plain support to the basis of wages paid them for work on public undertakings; such undertakings were represented as likely to yield a return in public benefit; the transfer, moreover, tended to dispel the evidence of unemployment, discourage work-dodgers, and demobilize the supported idle, in advance of a Presidential year. As to money, the policy of 1933 was reversed; ostensible approaches were made to Great Britain and other foreign powers, to the end of a general fixation of the values of currencies. Other steps, too, were taken to renew confidence on the part of capital: the President announced, after the adjournment of Congress, the virtual completion of immediate designs for social alteration. Much attention was given to preserving the strength of Federal credit; incurred deficit was covered largely in such ways as did not involve new borrowing, and a new enactment gave the Administration stronger control over the Federal Reserve system's interventions in the market for Federal bonds.

Opposition to the "New Deal." The course of the Administration drew persistent though ill concerted fire from each of two opposite directions. Conservative Republicans condemned what they regarded as abuse of the executive power and of the credit of the Treasury; radicals drew great and enthusiastic followings with proposals that nigardly distributions from the public Treasury be greatly augmented, to the benefit of the needy. Senator Huey Long (q.v.) of Louisiana advocated with energy and persuasiveness the proposal to share "our" wealth, promising that it would provide enough to make "every man a king." He thus gained a strong following in a number of the Southern States and had risen to the stature of a possible bidder for the Presidency in 1936 when one of his enemies in Louisiana ended his life. Father Charles E. Coughlin of Detroit, addressing a great audience periodically over the radio, condemned the Administration as distributing too little for the benefit of the needy and as acting in accordance with the views of the "money changers" whom the President had proposed to drive from the temple; organizations supporting Father

Coughlin's ideas were set up in divers States, with a view to later political activity. In California and other Western States the proposals of the Townsend group, urging Federal pensions of \$200 a month to the elderly, were widely approved.

The continued expenditure of about twice the Federal revenue and the consequent strain on public credit provided a target for the concentrated criticism of a group of men versed in finance or in public affairs: Ex-President Hoover (October 5) declared that "a gigantic spending bureaucracy" was "joyriding into bankruptcy"; former Secretary of State Bainbridge Colby (October 18), that the nation wondered whether bankruptcy could be avoided; the Administration's own former Director of the Budget, in a series of speeches in the East, that the New Deal's policy of expenditure could only stave off a "day of reckoning." These critics were relatively few; a much greater mass of opposition was concentrated on the Administration's hints of intent to seek Constitutional amendments to liberate the Executive and Legislative branches from the restraint of the Judiciary. Efforts were made in a number of the chief cities to observe Constitution Day (September 17) with more than usual ceremony, as an occasion for rallying the constitutional traditionalists. The Union League of New York issued a statement charging the President with attacking the Constitution in violation of his oath of office to defend it.

The National Association of Manufacturers, at a conference in New York, adopted on December 5, a "platform" frankly hostile to the Administration; this document proposed the repeal of legislative acts essential to the "New Deal"; urged the abandonment of a planned economic recovery; and condemned the direction of policies by persons not elected to authority.

The President. President Roosevelt met with increasing difficulty, during the year's protracted session of Congress, in maintaining his great influence over legislation. He made his will prevail over a strong element in Congress that would have set aside his plans for a law to ban holding companies in the field of public utilities, and the proscription of such companies was enacted, though in attenuated form. A similarly qualified victory for his influence was scored in the enactment of heavy taxes on the great private fortunes and on the incomes of the greater corporations. Substantial majorities in both houses voted for paying the veterans' bonus, against his veto, a veto delivered for the first time in the Nation's history by a President in person; but the veto stood.

In the choice of his immediate associates and advisers the President did not conspicuously extend his earlier resort to the services of academic intellectuals. Survivors of the "Brain Trust" of 1933 still held some important posts in the Administration but the enlistment of aides from the academic group had been largely given up.

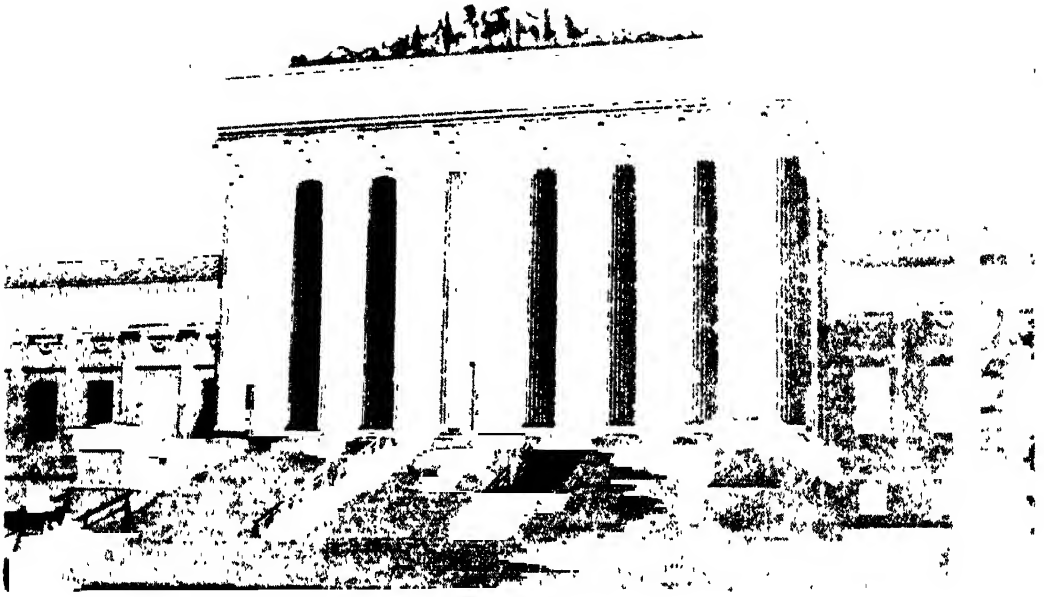
The President addressed the public on several occasions. He delivered by radio one of his "fireside talks" on April 28, advocating the measures then pending for extending the life of the NRA (not yet invalidated by the Supreme Court), for "economic security" (pensions for the aged and insurance against unemployment), for Federal regulation of public utilities, and for amendments to the Federal Reserve banking system; he also outlined the plan on which his project for the expenditure of \$4,000,000,000 already appropriated for "work relief" was to operate. In an address to a great delegation of farmers on May 14, he de-

fended the steps that had been taken to reduce agricultural production and the measures for butchering animals during the drought of 1934; he spoke satirically of the "crocodile tears shed by the professional mourners of an old and obsolete order over the slaughter of little pigs." He did not address the country directly on the occasion of the Supreme Court's overthrowing the NRA. But on August 24, in a speech by radio to a convention of the Young Democrats of America gathered at Milwaukee, he denounced "Tories," declared that rules were not necessarily sacred, and asserted that "the methods of the old order are not . . . above the challenge of youth." He had previously, a few days after the NRA decision, said in a press conference that the Supreme Court's action took the nation back to horse-and-buggy days.

Starting on a trip to the Pacific Coast on September 26, the President made several speeches on his route. At Fremont, Nebraska, he defended his agricultural programme against allegations of unconstitutionality, declaring it "an expression in concrete form of the human rights . . . perpetuated by the adoption of the Constitution." Dedicating the Boulder Dam, he stated that governmental spending had already begun to show signs of its effect on spending by consumers and that the time was at hand when private industry must take the principal part in accelerating employment. At Los Angeles he said: "We have come through stormy seas into fair weather," complimented California on its liberalism, and urged that all liberals act in harmony, taking "a common road." At the San Diego Exposition he spoke of the restoration of public confidence, the strength of the Government's credit, the success of the Federal efforts to relieve private need, of business improvement effected since his inauguration, and of the determination of the Government not to become involved in foreign wars.

Attacked with great severity and apparent injustice by such radicals as Huey Long and Father Coughlin for having failed to make good earlier promises to mend the state of the distressed classes, the President refrained from verbal reprisals. Federal moves against Long and his partisans in Louisiana, such as the withholding of Federal money from that State and proceedings against members of the Long group for tax-dodging, took the form of routine Federal procedure and not of overt Presidential retaliation. On August 24, immediately after the assassination of Long, Mr. Roosevelt entertained at luncheon at Hyde Park Father Coughlin, who had declared his support for Long some time before; this was taken to imply an overture on the President's part for harmony with Coughlin and the great audience that Coughlin swayed. The President had already, some weeks before, adopted one of Long's chief proposals by insisting that Congress thwart the perpetuation of great fortunes by prohibitive taxation.

Outward relations with leaders of the old individualistic system were not marked with an equal mildness on the President's part. While not singling out individuals, he told the farmers' delegation on May 14 that "the high and mighty, with special axes to grind, have been deliberately trying to mislead people who know nothing about farming by misrepresenting—no; why use a pussy-foot word?—by lying about the . . . farm programme." He rebuffed the Chamber of Commerce of the United States, convening in Washington at the beginning of May, and known to be critical



THE NEW SUPREME COURT BUILDING

The Court held its first session in this \$10,000,000 structure on Oct. 7, 1935.



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THE SUPREME COURT OF THE UNITED STATES

Front row, left to right: Associate Justices Louis D. Brandeis, Willis Van Devanter, Chief Justice Charles Evans Hughes, Associate Justices James C. McReynolds, and George Sutherland. Back row, left to right: Associate Justices Owen J. Roberts, Pierce Butler, Harlan F. Stone, and Benjamin N. Cardozo.

THE UNITED STATES

Wide World

THE "GRASS ROOTS" CONVENTION

View in the State Fairgrounds Coliseum, Springfield, Ill., during the conference of Midwestern Republicans on June 10 and 11, 1935

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SENATOR HUEY P. LONG'S FUNERAL

A group of intimate friends, led by Gov. O. K. Allen and Lieut. Gov. James A. Noy, are carrying the body to a grave in the lawn of the State Capitol, at Baton Rouge, La., on Sept. 12, 1935

Wide World

PRESIDENT ROOSEVELT SIGNING THE SOCIAL SECURITY BILL, AUG. 14, 1935

Front row, left to right: Representative Robert L. Doughton (N. C.), Senator Robert F. Wagner (N. Y.), Secretary of Labor Frances Perkins, President Roosevelt, Senator William H. King (Utah), Representative David J. Lewis (Md.), and Representative Samuel B. Hill (Wash.)

toward his policies, by refusing it the usual message of greeting. But he differentiated between captains of industry and business as a whole; told the press that the Chamber did not truly represent the latter; and on September 6 gave out a letter to Roy W. Howard holding out to business the assurance: "The basic programme . . . has now reached substantial completion and the breathing spell of which you speak is here."

Giving much of his own time and attention to the programme of "work relief," the President showed himself bent on avoiding the outcome in the case of the PWA, which had not succeeded in attaining a scale of public expenditure to match his original intent. He voiced in his "fireside talk" of April 28 his anticipation that the new programme would be "in full swing by autumn."

Monetary Regulation. The sweeping innovations in the administration of the Federal power to regulate the value of money, which prevailed in 1933 and 1934, gave way gradually to measures of monetary stabilization. While the Treasury's regulations against the possession of gold and silver preserved these metals, with specified exceptions, as a governmental monopoly, rules prevailed under which gold could readily be transferred between the United States and any other country allowing such transfers. The prevailing current of dealings in gold during the year, however, was toward the United States. In January and February, anticipating the possibility of early decisions in the Supreme Court, which might find against the Government in the gold cases, holders of gold abroad sold it to obtain dollars. In May the financial situation of France caused a heavy migration of gold from that country, mainly to the United States; the Treasury, out of an ample balance of cash, tendered dollars freely, through its agents, against offerings of French francs, thus assisting France in keeping the franc at its approximate value in relation to the metal, and checking the outflow of French gold. Again, in September and October, this time on account of fear of war in Europe, gold came to the United States in great quantities. The combined effect of the three gold waves was to augment the Treasury's gold stock substantially; the Treasury had \$9,584,000,000 of monetary gold on October 16, as against \$7,990,000,000 a year before, the increase being by one-fifth.

Another cause of this increase was the Treasury's demonstration of intention to keep the value of the dollar stable, for the time at least, in relation to gold. Secretary of the Treasury Morgenthau declared in the course of a speech by radio on May 13 that the Government was ready to join other powers in a concerted stabilization of currencies. The idea was further hinted to other of the chief governments, but was discouraged by Neville Chamberlain, British Chancellor of the Exchequer, in a public address on October 1. Nevertheless, the impression spread that the Administration was no longer, as in July, 1933, averse to the idea of a dollar of fixed metallic value. This impression worked to the advantage of the Administration's plans as to the public debt.

The Bidding-Up of Silver. The Government continued to purchase new silver from domestic mines and to offer to buy silver abroad, a course required by the Silver Purchase Act of 1934. The price that it bid, however, remained 64.64 cents an ounce until April 10. This was one-half the maximum contemplated by the act. Failure to advance the bid agitated the chief backers of the act, and

they considered further action in Congress. The President dealt with the situation by a proclamation of April 10 reducing the seigniorage on silver to 45 per cent, from 50; in effect, raising the price by 10 per cent, to 71.11 cents an ounce. Senator Wheeler nevertheless introduced a bill for the compulsory Federal purchase of 50,000,000 ounces of silver a month. The President in turn raised the Government's bidding price on April 24 to 77.58 cents an ounce, or 60 per cent of the contemplated \$1.29. This brusque lifting of the bid by one-fifth in a fortnight threw the foreign silver markets into a speculative frenzy; the foreign quotations approximated an American equivalent of 81 cents, hard upon the news of the final rise in Washington's bid. This implied that no one was selling foreign silver to the United States, all preferring to sell abroad or to wait in hope of a still higher price from the United States. Within four days the foreign silver markets broke below parity with the American bid; a second slump followed on July 9, in which it was reported that some 12,000,000 ounces were unloaded on the Treasury by the market in London. Secretary Morgenthau stated on June 11 that the Government had bought 421,497,000 ounces of silver in the time from Aug. 1, 1934 to May 31, 1935. This included 112,850,000 ounces of nationalized silver taken over at 50 cents, 283,000,000 bought in open markets and delivered, and 25,647,000 of newly mined domestic silver. The sharp lifting of the Federal price in April served to show that enhanced bidding merely provoked an unstable speculation in the metal.

The Treasury altered its policy of purchasing silver, by ceasing, without warning, on December 10, to bid any price at all for the bulk of the offerings of this metal in the chief foreign markets. The market in London was consequently unable to transact business in silver on that day; subsequently the price of silver abroad ruled sharply lower than that paid by the Treasury for the product of domestic mines, which was maintained. See CHINA and MEXICO under *History*.

Extinction of Bank Notes. The Treasury had at the beginning of the year a sum in "free gold" certificates amounting to some \$650,000,000, less an unstated portion previously paid out; the sum represented the balance that remained of the dollars brought into existence by the Government's taking the gold from the Federal Reserve banks in 1934 and putting a higher dollar valuation thereon by law, after the greater part of these newly-created dollars had been set aside as a fund with which to render the monetary system stable in foreign exchange. National banks' holdings of Federal bonds, posted with the Government to secure National Bank notes of equal amount, totaled some \$677,000,000, chiefly in 2 per cent consols and Panama Canal bonds but also partly in other Federal bonds admitted temporarily to the circulation privilege under an act of 1932. Armed with an act of 1935 the Treasury called, for redemption on August 1, all the 2 per cent consols and canal bonds, about \$675,000,000 in principal, of which some \$531,000,000 was pledged for bank notes. Some days earlier, on July 22, the circulation privilege on other bonds used to secure bank notes expired. Thus by August 1 all bank notes had been covered by payments from the issuing banks to the Treasury, while the only bonds that remained endowed with the unlimited circulation privilege had been retired. The type of currency on which largely the National banks had been built up was terminated.

The operation yielded the Government the advantage that it reduced the public debt by \$675,000,000 while reducing its immediate cash balance by only some \$180,000,000, the cost of redeeming the bonds not pledged for circulation and of returning to the banks their statutory 5 per cent deposits—plus the relatively small payment made to meet bank notes immediately presented for payment at the Treasury. Experience had shown that bank notes returned only gradually after they had been called in; until they did so the Government had the use of the cash. It was possible, in consequence largely of this operation, to run through a great part of the year without increasing the public debt, even though the deficit continued to rise.

Federal Obligations in Payment of Taxes. The Commissioner of Internal Revenue issued instructions on June 9 to collectors not to accept in payment of income taxes certain Treasury notes falling due on June 15, except at their face value in the devalued dollar. It had been reported in May that plans were in preparation to offer such notes for payment of Federal taxes at their face value (gold) in the old dollar, as the terms of the notes were contended to permit. The contemplated litigation was designed to determine the legal standing of sundry of the funded debts of the United States as media for the discharge of tax debts to the government, a matter on which the Supreme Court had not specifically passed in the gold decisions.

Federal Finances. The year in Federal finances was characterized by higher Federal revenues during most of its course, by a slackening of the increase in the public debt, and by a generally though not uniformly eager market for the Government's paper. The Federal Administration's new leanings toward monetary stabilization helped its credit and so facilitated the further conversions by which the last of the Liberty bond issues was extinguished.

Receipts and Expenditures. The President introduced on September 29 an intended annual presentation of a "Summation of the Budget." The document then given out set forth the state of the budget for 1936 as Congress, on adjourning, had left it. It also summarized the actual receipts and expenditures of the fiscal year that had ended with June 30, 1935. These were: receipts, exclusive of postal revenue, \$3,800,467,202 (\$10,421,470 being realization upon assets and the rest revenue); expenditures, \$7,375,825,166 (of which \$4,262,257,209 was for "recovery and relief," \$820,926,353 for interest and \$573,558,250 for statutory retirement of debt). There thus appeared a deficit, for the year, of \$3,575,357,964 in all, or of \$3,001,799,714 exclusive of the cost of retiring debt. The President had proposed to Congress in January, 1934, that the Government spend \$9,403,006,967 in all of the then half finished fiscal year 1934 and between \$3,960,798,700 and \$5,960,798,700 for the fiscal year 1935, both exclusive of debt retirements. The Administration had consequently spent only a relatively slight amount above the low limit of what it had budgeted for the two years. The extraordinarily high appropriations for "relief and recovery" that the President had asked for finishing the fiscal year 1934 had, with further relatively moderate appropriations for the fiscal year 1934, carried the Government through well below the President's upper estimate. The effect, whether designed or not, was to create greater ease of temper, both in Congress and among the public,

than had budgets merely foretold, or had they failed to match, the actual expenditures of the two-year period.

The budget for the fiscal year 1936, as revised in the "Summation," to accord with the measures of the Seventy-fourth Congress (first session), estimated total receipts at \$4,470,349,140 (\$4,366,409,335 in revenues and \$103,939,805 in realization upon assets); expenditures, at \$7,752,332,000 (of which \$4,154,824,000 for "recovery and relief," \$551,000,000 for retirement of the public debt, and \$745,000,000 for interest). A lower total than that for 1935 in estimating interest was rendered possible, in spite of a higher debt, by the conversions of old issues of bonds into new issues bearing much lower rates of interest. As regards total expenditures for the fiscal year 1936, Congress appropriated, according to the "Summation," \$8,671,427,171, but the President had subsequently made deductions in his estimates for public works.

In the first half of the fiscal year 1936 (last half of calendar year 1935) expenditures attained \$3,781,660,702; in spite of the non-collection of some \$200,000,000 of processing taxes, the total receipts of the period, \$1,902,009,509, actually exceeded those for the corresponding period a year earlier, the flow from most of the sources of income having improved.

Uncertainty as to Processing Taxes. The President included in the above-stated estimate of receipts for the then-current fiscal year 1936, \$536,000,000 for processing taxes on agricultural products, and he allowed for an outgo, from these taxes, of \$555,000,000. But there was in progress at the time a movement among firms liable for these taxes to sue out injunctions against their collection, on the ground that the Agricultural Adjustment Act had transgressed the Constitution in laying them. The issuance of such injunctions became quite common by mid-autumn. The receipts from processing taxes correspondingly fell; the Government was pledged to the growers, to pay them their fees for limiting cultivation or the raising of animals. It thus ran risk of having to make the payments by recourse to borrowing, unless or until the law should be approved by the Supreme Court.

Debt. The Federal gross public debt rose from \$27,053,141,414 on July 1, 1934, to \$28,700,892,654 on June 30, 1935. This increase, of \$1,647,751,210 for the fiscal year, was smaller by \$1,354,048,504 than the year's deficit, net of statutory retirements of bonds. The difference was made good out of a previously very high balance of the general fund, out of certain of the special funds' excesses of receipts, and out of gold "profit" from revaluation, monetized to the total of \$91,415,650 by the issuance of gold certificates which were paid out to retire bank notes. (See also *Extinction of Bank Notes*, above.) New resort to borrowing after June 30, raised the gross debt to some \$30,557,000,000 by the end of the calendar year, the increase approximating \$1,856,000,000 for the six months.

The Treasury redeemed, by call, during the year, the remainder of the issues of Liberty bonds; \$1,850,000,000 of the Fourth Liberty 4½ per cent issue were redeemed on April 15; \$1,933,209,950 (the remainder) of the First Liberty 3½ per cents were called on March 14 for redemption on June 15; \$1,250,000,000 (the remainder) of the Fourth Liberty 4½ were called on April 14 for redemption on October 15. The bulk of the holders of these issues accepted in exchange either bonds bearing 2½ per cent interest, callable in 1955 and

maturing in 1960, or else securities of shorter maturity. Thus was completed in two years the retirement of some \$8,200,000,000 of Liberty bonds. The operation was rendered advantageous to the Government by the superabundance of funds in banks and the consequent demand for investments, carrying the limitation of Federal bonds as to taxation, at unusually low rates of interest. All the bonds that were called carried the gold clause, but there remained a substantial total of Federal bonds of later issue, yet prior to the abandonment of this clause and therefore carrying on their face the promise of the Government to pay at the old gold value of money. None of the latter bonds were callable before 1940; all involved for the Government some risk of being obliged to make good its promise in the event that any means should be found at law to compel the Treasury to cease the denial of payment in the old value, a denial that the Supreme Court had condemned in the gold cases (*See Judiciary*).

Popularizing Federal Issues. The Treasury sought to increase the number of takers of its obligations by issuing a new type of security called United States Savings Bonds (popularly, "baby bonds") and by offering certain issues of ordinary types to the highest bidders for any part thereof. The savings bonds somewhat resembled the savings certificates of some 15 years earlier. Instead of paying interest periodically they were purchasable at three-fourths of their face value (in denominations from \$25 to \$1000). They matured in 10 years and thus yielded nearly the equivalent of 29 per cent per annum (compound) in appreciation. They were not transferable except in special cases, as of decease; they were redeemable at the possessor's option, but at rates yielding less than 2.9 per cent per annum for any period less than the full 10 years; nor were they redeemable before maturity literally at presentation, but only after approval of the application for repayment by the proper officials at Washington.

The sale of ordinary obligations to highest bidders varied with the usual previous practice of the Treasury, to offer the Government's securities at some set price and to prorate allotments among the normally excessive bids. The new method worked well on several occasions but failed on one occasion, late in August, to bring in enough acceptable bids for \$100,000,000 of four-year bonds of the Federal Farm Mortgage Corporation, bearing the Government's guarantee.

The New-Deal Organizations. Among the Federal bodies that had grown out of the "New Deal," those most prominently connected with the year's events might be put into two groups, the first designed primarily to help one or another social class, and the second having for their main functions the restriction of certain interests.

In the first group, the NRA (National Industrial Recovery Administration) was disrupted by an adverse decision of the Supreme Court, but its name survived in a curtailed organization; the AAA (Agricultural Adjustment Administration) carried on its work, of restricting agricultural production and of paying farmers bounties to cut their output for their own benefit, although it was threatened by attacks on its constitutionality; the PWA (Public Works Administration) failed to take up the expected amount of the slack in employment through its promotion and financing of public works; the WPA (Works Progress Administration), somewhat resembling the CWA of

1933, was set up in order to supplement the PWA's efforts to eliminate the dependent idle; the FERA (Federal Emergency Relief Administration) continued until the closing days of the year to dispense support to many for whom these other agencies had not yet provided employment; the CCC (Civilian Conservation Corps) was expanded in order to care for a greater number of otherwise unemployed young men; the HOLC (Home Owners' Loan Corporation) started further extensive lending to mortgagors; the RRA (Rural Resettlement Administration) succeeded the Subsistence Homesteads Division and greatly extended plans for moving families into locations deemed more advantageous; the National Youth Administration (within the WPA) was created, to provide "work, relief, and employment" for young people under the age of 25 years, with particular reference to students; the REA (Rural Electrification Administration) was formed to promote and to finance, by loans, public or private projects for supplying rural areas with electricity.

In the second group, the TVA (Tennessee Valley Administration) gained more local adherences to its proposals to supply its area with electricity at less cost than that from private companies; the SEC (Securities Exchange Commission) eased some of its restrictions on commerce in securities; the FACA (Federal Alcoholic Control Administration), having derived its main regulatory powers from the Recovery Act, died with the NRA and was replaced by a less powerful Federal Alcohol Administration, set up in the Treasury Department; the Federal Trade Commission was directed to act jointly with the new, curtailed NRA in supervising the drawing of voluntary codes for the regulation of business groups, and it issued a series of reports, largely adverse, on the affairs of electric holding companies.

End of the First NRA. The Supreme Court's decision of May 27 in the *Schechter* case rendered it immediately apparent in all quarters that the NRA as constituted nearly two years before could not go on functioning to regulate prices, production, the codified relations within business groups, the conditions of labor, or the settlement of disputes between employer and employee. The NRA was about to expire by the statutory limitation of its life, and Congress was at the time busy with a bill to extend its duration and amend it. Instead, it passed an act to preserve under the same name, temporarily, a few of the wholly secondary functions of the organization.

The NRA had up to this time expended some \$94,000,000, as estimated by the National Industrial Conference Board, in administering codes and in other cognate activity. It employed about 5400 people, most of whom passed, at least temporarily, into the employ of other Federal organizations, the new NRA included. The Attorney-General had in his hands 411 cases, then in the courts, in which he was suing or prosecuting on the NRA's behalf. All these cases, largely involving infractions of codes, were dropped; among others, the *Houde* and *Weirton* cases.

NRA's Economic Sequels. Within a few days after the *Schechter* case had been decided there followed more or less cutting of prices, particularly in the retail sales of such goods as cigarettes, toilet wares, and books. According to a statement issued by the American Federation of Labor on June 6 fully a million recipients of wages were subjected to cuts in pay or to longer hours of work in the course of the six business days follow-

ing the decision. Struggling industries such as the cotton-garment trade, lumber, hotels, and many retailers were reported to have been chiefly active in these changes. Industries that were better off quite commonly declared for maintaining wages or for continuing to follow the existing codes for their regulation. The President, by executive orders, prolonged the existence of the National Labor Relations Board, the Steel Labor Relations Board, and the similar board for the textile industry until the advent of the successor board provided by the Wagner Act. Organized labor, though it had shown dissatisfaction with the NRA, resented the loss of the privileges accorded it by Section 7-A of the Recovery Act; it took the enactment of the Wagner Labor Disputes Act, restoring and amplifying the privileges of labor organizations under 7-A, to remove the risk of an outbreak of strikes.

Fate of Codes. Even before the invalidation of the NRA the effort to regulate industry in almost all its branches through codes had met with great difficulties in some quarters. Not only had Henry Ford, commonly esteemed the most prominent person in the manufacturing world, refused to the end to sign any code, but there had occurred defections as time went on, and as the course of suits in the Federal courts set more and more against the NRA's authority. The mail-order firm of Montgomery, Ward and Company consistently refused to pay dues demanded of them to meet the cost of administering the retail code and were consequently excluded from sales to the Government. The Department of Justice having dropped the Belcher case, its chief effort to enforce the lumber code, the Lumber Code Authority took the position that this, "in effect if not in fact," was equivalent to the suspension of the code; the implication was that if the Government would not protect followers of the code against infractions by others it could not expect the former to cling to the code, unprotected.

With regard to the voluntary codes for which provision was made after the end of the old NRA, their value to industries adopting them remained in some doubt, since the abolition from certain provisions of the anti-trust laws, granted to subscribers to codes under the NRA, might no longer apply to subscribers to voluntary codes. The act "extending" the NRA in its attenuated form, authorizing such codes, did grant the President authority to allow a limited suspension of the anti-trust laws antagonistic to these agreements, but the validity of the proceeding had still to be tested. The first voluntary code to be presented, that of the Wholesale Tobacco Distributors, approved by the Federal Trade Commission on July 19, contained not only minima for wages and hours of work but also rules to govern trade practices.

Labor and the NRA. The American Federation of Labor contended vigorously, during the earlier part of the year, to displace company unions in collective negotiations with employers and to gain a hold upon industries that had not been unionized. Dissatisfied with the President's action of extending the term of the then-existing automobile-manufacturing code, the council of the A. F. L. imputed the responsibility for this course to Donald R. Richberg, secretary of the National Emergency Council and guiding spirit of the NRA. Richberg, who had served labor unions as a lawyer, was denounced as a "traitor" by high officials of the A. F. L. Eighty local unions in the mainly non-union automobile industry had declared on

January 24 against further coöperation with the Automobile Labor Board, a body created by the President in March, 1934. This body was nevertheless continued as the Government's representative in labor matters in its field. This board, despite the unions' opposition, held a series of elections in the great automobile-manufacturing establishments, to determine the employees' choice for or against affiliation with unions. The votes generally gave heavy majorities in favor of nominees unaffiliated with the A. F. L., for representatives in collective bargaining. Those favoring the A. F. L. were some 30 per cent of all who voted in the industry.

A strike was started on April 23 in the Chevrolet manufactory at Toledo, but did not spread to the chief centre of the industry, in the Detroit area. Some ten days later the strike was settled, the company agreeing to deal with the A. F. L. representatives as spokesmen for those employees who had become affiliated with the Federation. It thus chanced that the drive to effect the plans of the Federation in the foremost un-unionized industry came to a halt three weeks before the overthrow of the NRA. No general outbreak of labor troubles followed the latter event, although a strike of longshoremen at the Gulf ports in the autumn led to a number of local affrays and to delays for shipping.

The Abbreviated NRA. The NRA as extended, by resolution of Congress, beyond June 12, had as Administrator James L. O'Neill. In addition to preparing data on the earlier work of the NRA, its function was to collaborate with the Federal Trade Commission in handling such voluntary codes as the members of industries might wish to set up in order to regulate their practices. It terminated on September 5 the use of the "Blue Eagle," the emblem of compliance with the Recovery Act of 1933. A new National Labor Relations Board, created by the Wagner-Lewis Act and separate from the NRA, was set up in August, to mediate in labor disputes and to judge the rights of employees to organize as provided in the act. An executive order of December 12 required that the skeleton of the NRA be dissolved on Jan. 1, 1936; the Consumers' Division was transferred to the Department of Labor; the Division of Review, Division of Business Cooperation, and Advisory Council were transferred to the Department of Commerce.

Managed Crops and the AAA. The AAA, according to a report of the Comptroller-General, expended in 11 months ended with May 31 a total of \$767,195,306; this, chiefly in \$535,547,699 dispensed to farmers for restricting their production, \$145,595,565 devoted to buying up and processing animals that were starving in drought-stricken areas and to furnishing farmers in such regions with seed, and \$34,401,654 for administrative expense. The organization had to stand criticism from groups irritated by a rise in the cost of food, from the Brookings Institution, which reported doubt of the merit of "indefinite continuation" of the control over production of wheat, and from those who complained of the presence of men of allegedly radical bent in its personnel. Several men left the AAA in February, its counsel, Jerome Frank, included, on account of the latter criticism. The AAA maintained that though the level of prices for food had risen, that of earnings in employment had risen yet more. To demonstrate the popularity of the AAA among farmers, some 3000

from nearly a score of States, chiefly Southern, made a concerted trip to Washington in May and appeared at the White House. The question of the spontaneity of this demonstration was discussed in the Senate.

Dry weather in the winter and early spring afflicted much of the grain belt and thus threatened the country with an absolute shortage of wheat and Indian corn, of which the previous deficient harvest had caused the surplus to shrink below safe limits; the AAA therefore lifted on March 20 the restrictions on the planting of spring wheat. Grain in some quantity was later imported.

While the industries using foodstuffs as their raw materials were slow to resort to the courts for remedies against the harm that some of them sustained from the processing taxes and scarce supply, the Northern cotton textile industry acted otherwise. A strong movement of opposition to the policy of Secretary of Agriculture Wallace arose in New England, where many cotton mills were taking losses. Mr. Wallace rejoined in a speech at Atlanta, on April 13, with a warning that if opponents should succeed in overthrowing processing taxes more severe methods to protect cotton-growers and other farmers might follow.

At Brunswick, Me, on April 17, Mr. Wallace charged New England's textile manufacturers with whining and with advancing "chiseling claims for special power, concealing their true motives under a cloak of false publicity." In the tense state of New England feeling that followed, the receivers of the Hoosac Mills brought suit at Boston to invalidate claims against them for payment of the processing tax on cotton that these mills had used. The suit, denied by the Federal District Court, went to the Circuit Court, which held on July 16 (after the Supreme Court's NRA decision) that the processing tax was unconstitutional. There followed an avalanche of other suits against like taxes.

Many who first sued over processing taxes sought and, in a number of instances, obtained decisions declaring the processing taxes on a variety of farm products to be void. Later the tendency was for manufacturers to withhold payments of such taxes and to obtain Federal injunctions preventing Federal officers from collecting; thus the chief meat-packing companies applied at Chicago for an injunction on July 29. By August 20, 1148 temporary injunctions against the collection of processing taxes had been granted, according to the Department of Justice. Actual collections of the taxes fell off even in advance of the shower of injunctions; from a total of \$30,950,261 for June, the collections declined to \$15,364,401 for July. In the autumn the AAA faced the difficulty of having to go on paying farmers, under its bargains with them for restricting crops, though the Government no longer received from processing taxes the requisite amounts for this purpose. The amendment of the Agricultural Adjustment Act by Congress occurred while suits against the AAA were in progress; this brought into the litigation the additional issues raised by the new act's provisions to hinder suits against processing taxes.

The operation of punitive taxes applied by divers laws to non-conforming farmers seeking to market such products as tobacco and cotton, was disturbed by yet other suits. Governor Talmadge of Georgia, acting as an individual farmer, was one of the number who sued against the tax of 6 cents a pound applied by the Bankhead Act to cotton produced outside of allowed quotas. The Potato Con-

trol Act of 1935, which would have imposed a similar tax, was marked by the AAA for probable non-enforcement, for lack of funds, on the ground that Congress had not passed an appropriation to cover the cost of administering it. A plan for paying farmers a bonus of 25 cents a bushel to divert potatoes to the feeding of livestock, the making of starch, and other uses was drawn up as an administrative substitute. An effort to enforce discipline on milk dealers through a Federal system of licensing in Boston was checked on May 17 by an adverse Federal District Court decision (Judge Brewster), at a time when New York and some States adjacent to it were planning for Federal control of milk in their area.

The case of cotton differed from those of most other crops in that the growers continued to produce considerably more than the market would take of American raw cotton. Cotton exports fell off heavily, and domestic mills found the textile demand at home disappointing. This necessitated the continuation of Federal loans on cotton held off the market. But the AAA, confronted by the inroads made by Brazil and other countries on the American exports of cotton, decided against maintaining the old rate of lending at 12 cents a pound on the basic grades. Instead, it announced on August 22 a rate of 9 cents a pound with compensation in the form of a bonus of 3 cents a pound or whatever lower differential would bring the growers' receipts up to 12 cents, this bonus to be payable when cotton had been sold. Pressure in Congress forced the AAA to raise the rate for the loans to 10 cents, cutting the bonus to 2 cents, conformably.

The Kerr-Smith Act regulating the production of tobacco was held unconstitutional and void by a Federal District Court decision at Louisville (Judge Dawson) on April 13. Nevertheless the vote among tobacco-growers, as to extending the limitation of acreage in flue-cured tobacco through the AAA, was taken on June 29 and showed a sweeping majority in favor. A vote among growers of wheat, taken in May, favored continuing Federal control over the production of wheat, by about six to one out of some 250,000 ballots. Over 941,000 farmers voting October 26 approved by nearly seven to one renewed Federal control for 1936 over corn and swine. The AAA began lending on farmers' corn at 45 cents a bushel, October 30.

Secretary of Agriculture Wallace sought in December an authorization under the act of 1935 amending the AAA, to spend part of the Federal receipts from customs in buying surpluses of fruits and vegetables for distribution among the needy; but Comptroller-General McCarl denied the authorization, holding that a free distribution "would in no sense accomplish the purposes of the act." The AAA had taken over from the FERA, December 13, the Federal Surplus Relief Corporation. With regard to the use of relief money for the administration of the law of 1935 restricting the sale of potatoes, McCarl ruled on November 16 that this money could not be so applied.

The PWA's Activities. When the President set up in April a new organization to manage the expenditure of the \$4,000,000,000 that had been provided in order to shift the dependent idle from direct public assistance into paid occupation he preserved the PWA but did not make it the chief instrument in the new plan. It had not been able to promote and finance new undertakings within its field as fast as had been hoped. The difficulties that it encountered were due to several causes. Admin-

istrator Ickes had taken great pains to combat the entry of graft and politics in the use of money granted or advanced by his organization. Litigation had delayed the advance of projects for housing in cities and for electric development by local governing bodies; suits led to a Federal District Court decision on April 23 (Judge Watkins) at Greenville, South Carolina, that money from the PWA might not be used by Greenwood County to construct a power plant prejudicial to the property of the Duke Power Company, and a Federal Circuit Court decision on July 15 at Cincinnati, that the PWA could not condemn land on which it sought to erect housing for people of low income. Some \$740,000,000 allotted to Federal plans for housing was declared in September to await the Supreme Court's review of the latter case.

Many private companies selling electricity opposed the PWA in the courts in the same manner as the Duke Power Company, mentioned above. Many projects for municipal electrical plants, moreover, could not satisfy requirements set by the President, limiting the rate of yearly cost, for public works, to the number of persons employed. In Louisiana (q.v.) the passage, under the Long dictatorship, of laws hostile to the Federal policy caused the suspension of Federal aid for public works. Under the new programme of "work relief," furthermore, allotments favored by the PWA and payable out of the \$4,000,000,000 work-relief fund had to pass the inspection of an Advisory Committee on Allotments, separate from the PWA.

Congress had allowed the PWA to expend a great part of the four-billion dollar "work-relief" fund, in loans and grants toward the cost of approved projects for public works. There was no lack of applications for such grants. By September 11, those from 47 States numbered more than 10,000, called for the employment of nearly 1,600,000 persons, and reached a total proposed cost of \$2,646,075,504, of which the PWA was asked to grant outright \$1,144,735,840. But only a score or so of the projects in this class had reached the actual working stage; nearly 2000 others, favored by the PWA, had failed as yet to gain the approval of the Advisory Committee on Allotments; the rest had, for the most part, to pass the scrutiny of the PWA. The President thereupon decided to support Works Progress Administrator Hopkins in diverting to other forms of "work relief" the greater part of the PWA's intended grants of \$900,000,000. According to figures published on October 1 the PWA allotted only an approximate \$327,000,000 in grants, the rest of the fund being diverted from its disposal. Another fund, amounting to \$400,000,000, which the PWA was to expend on roads and the elimination of grade crossings, had as yet provided only \$13,762,000 in fully approved projects.

The PWA, before the setting up of the work-relief system, had lent much Federal money to finance divers sorts of construction; in return it had received the obligations of the borrowers. The President, by an executive order of June 8, authorized it to sell such securities directly, instead of acting through the Reconstruction Finance Corporation. It could thus in theory recover the money it had lent and lend this money again to finance additional loans of like sort. The President approved on June 21 an allotment of \$23,000,000, additional to the PWA's original \$15,000,000 allotment, for work on the Grand Coulee Dam in the Columbia River; studies were made as to the pos-

sible creation of a Columbia River Authority, similar to the TVA, for handling the Federal projects at Grand Coulee and Bonneville.

Rise of the WPA. The Works Progress Administration was the Federal Government's chief new experiment of 1935 in special organizations to cure economic ills. The President, by executive order of May 6, created this agency, rendering it "responsible to the President for the honest, efficient, speedy, and coordinated execution of the work-relief programme as a whole." It was also to recommend and carry on "small useful projects designed to assure a maximum of employment in all localities," and to help the President to prescribe as to the pay and the conditions of labor on projects. Harry L. Hopkins was made Administrator; he was already Administrator of the FERA and was retained in that post. His double capacity gave him control of both ends of the situation in shifting the unemployed from direct doles to remuneration for devised tasks. The same executive order created a Division of Applications, for receiving applications for allotments of work-relief money and for revising them; also, an Advisory Committee on Allotments, headed by Ickes, to recommend allotments to the President. The latter was to ratify these as he saw fit, but then it remained for the Comptroller-General to pass on the legitimacy of the proposed disbursement.

Since the whole plan of "work relief" looked to a prompt transfer of relief from the basis of donation to one of remuneration, the Hopkins influence became predominant. Many of the States had the greatest difficulty in raising the money required of them as a condition to their receiving aid from the FERA. They had reason to look forward eagerly to its being supplanted by "work relief." The dependent idle hoped to improve their living by the change. The Administration had let it be understood that it intended to shift to paid work 3,500,000 persons by November 1. As the progress toward this goal fell more and more behind schedule the WPA was more and more expected to find ways to carry matters forward. According to a news report of September 13 the President assigned to Administrator Hopkins the task of finding work through the winter for the then still unplaced two and a half millions of unemployed out of the 3,500,000 who were to get work by November 1.

The assignment of the "work-relief" appropriation, as stated at the beginning of October, included \$900,000,000 for the continuation of "direct relief" on a limited scale through the winter and \$600,000,000 for maintaining the Civilian Conservation Corps. Of the available \$3,425,000,000 that remained, \$1,150,000,000 had been assigned to the WPA's projects for devising work. Typical of the WPA's numerous projects, as they required little spending except for direct wages, were the hiring of professional writers to prepare a national guide book, the employment of musicians and actors to give performances, and the creation of athletic fields, golf courses, and other places of outdoor sport.

The President prescribed by executive order of May 20 a scale of wages to apply to all employment under the plan of "work relief." The recipients were put into four classes according to their types of work; types in turn were classified by regions, in correspondence with variations in the cost of living. The top pay was set at \$94 a month for professional people in New York City; the bottom, at \$19 a month for Southern unskilled farm

hands. The pay in corresponding grades was much below what the private employers in industry (as affected earlier through the NRA by the Government itself) were giving. The President intended both to make the available money employ 3,500,000 people and to pay them such low wages that they would quit Federal pay for private employment as soon as they could. Some of the people employed at Federal expense soon showed disappointment with their rewards. Unionized mechanics employed on WPA jobs in New York City started a strike at the beginning of August. General Hugh S. Johnson, former National Relief Administrator, who had been made head of the WPA's organization in New York, refused to treat with the strikers. The Administration took the view that one could not strike against the relief of one's economic distress. The State Federation of Labor took the strikers' part. As projects required a certain number of skilled workers, the protraction of the strike among the latter tended to hold back employment for other men, who wanted to work. The Government finally conceded on September 19, not a rise in the monthly pay of the strikers, but a reduction in their monthly hours to 80, from 120. A strike in Iowa was settled in August by granting increases in monthly pay. Later, as the number of positions under the WPA increased, there occurred some difficulty in obtaining necessary skilled workers for some projects.

FERA Superseded. According to data published on March 1 the FERA spent \$1,069,333,771 in the calendar year 1934 to dispense aid to the dependent unemployed in the 48 States. This came to 72.3 per cent of the total so spent; the remainder came from the governments of States and of communities within them. There was much discrepancy in the non-Federal percentage among the several States. It was less than one tenth of 1 per cent in Florida and more than 54 per cent in Rhode Island. The number of families and of single persons (not in families) receiving aid from the FERA remained well above 4,000,000 (as estimated) until May, when it was still put at 4,100,932. It fell more than seasonally to 3,830,871, as reckoned for June, and somewhat farther thereafter. The figures did not include the needy persons aided under rural rehabilitation, aid to students, and special aid to transients. The FERA announced the termination of its grants to States, for the support of the destitute, with the payments made at the end of November. Many then still depended on this aid, but much the greater part had been shifted to public works and the WPA. The FERA spent \$1,692,234,807 in 1935.

The number of individuals partaking in the support accorded to the approximately 4,000,000 direct recipients of early 1935 was undetermined. Some judged it to be about four times this figure, on the theory that the provider with a big family to support was the one soonest to become destitute from lack of work; this way of estimating would have put the dependents on the FERA early in the year at 16,000,000 or more. The number of all individuals dependent in whole or in part on the receipt of funds from the Federal "new deal" greatly exceeded that of the FERA's beneficiaries alone; for, not to count regular jobholders, it included 300,000 in the CCC, an unknown number engaged on works of construction either directly by the Government or under contractors, persons whose farms or homes were saved by the Federal refinancing of mortgages, artisans employed with money from loans obtained from the PWA, em-

ployees of railroads kept solvent by loans from the RFC, and the greater part of 6,000,000 farmers and their employees and dependents as recipients through the AAA, drought relief and seed loans. It seemed likely that one-third or more of the population was more or less dependent on money that had come from the Treasury or for which the Treasury was liable.

It was the intention in April, at the start of the scheme of "work relief," that created jobs should absorb the FERA's employables by mid-autumn. The most commonly alleged need for this change was that people of proper spirit preferred working to taking a dole. The consideration, less discussed, that dissatisfaction with the amounts given in money, provisions and the like had brought on some serious local disturbances, had its weight. Again, the cost of administering outright assistance to the needy was high; for all the States combined it was reported to have come to 9.9 per cent of the total expenditure of the FERA and the States' relief bodies for January; i.e., to nearly 11 per cent of what the beneficiaries received. The pay of some 163,000 relief workers, mainly engaged in examining the cases of need, formed the chief administrative expense.

The later allotments of funds to the FERA were made out of the work-relief total, starting with \$87,000,000 on September 13.

The FERA had difficulties with the governments of several of the States; it met with these either in bringing the States to bear a greater part of the cost of aiding the needy than the State authorities cared to undertake or else in stopping alleged abuses in the distribution of Federal aid by State organizations. Grants of Federal funds in some cases were cut off by Administrator Hopkins, or were reduced, where States had either not appropriated at all or had appropriated less than they seemingly could afford. The States thus pressed or threatened into paying more included Illinois, Pennsylvania, New Jersey, Minnesota, Idaho, and Washington. In Ohio, acting on allegations of corrupt political interference, the President ordered Administrator Hopkins to take over from State authorities the administration of aid.

Maintaining needy war veterans in camps was one of the special activities of the FERA. Many of the men in these camps, according to current accounts, had left their abodes to go to Washington, somewhat in the manner of the bonus army of 1932. Instead of letting them become numerous in Washington the Government offered them maintenance in special camps. It set up three such camps among the Florida Keys. The Labor Day hurricane swept over the keys, driving the sea many feet above the normal high tide. The camps were inundated. Of the 716 veterans that occupied them, 327 were lost and 138 were injured.

About 865 persons forming a group of families from Michigan, Wisconsin, and Minnesota were sent to Alaska in May, with an additional number of men having no fixed home. The FERA maintained them in tents while building houses in which to settle them as farming colonists at Matanuska in the autumn.

Expansion of the CCC. Heavier enrollment in the CCC formed one of the features of the scheme of "work relief." The maximum number to be enrolled was raised to 600,000. The progress toward that total, however, was slow. The camps had about 519,000 members at the end of August. In order to raise the enlistment the minimum age of eligibility was then lowered to 17 years. It was

asserted that many who might have gone to the camps were dissuaded by hope of getting work at home under the WPA. The members of the CCC were credited with having planted about one-half of 164,000,000 young trees set out in 1934 in National and State forests.

Bituminous Coal Control. The President appointed under the terms of the Guffey Coal Act of 1935, on September 20, the five members of the National Bituminous Coal Commission and the three members of the Bituminous Coal Labor Board. The new organization was acceptable both to the labor unions and to most of the operators in the Appalachian field. The two groups, which had been in disagreement for months, reached six days later an agreement, to run for 18 months, which was to provide substantial increases in pay to some 400,000 workers. The "captive" mines of the chief coke and steel companies in the Pittsburgh area were soon brought into the agreement. On the other hand operators in Southern fields held that they could not accept a code governing their business unless it should allow them very ample differentials below the rates of the better situated fields. A number of them brought suit for an injunction against the tax that the act laid on the production of non-complying mines.

Federal Home-Building and Resettlement. The Subsistence Homesteads Division had been created by the President under the terms of the Recovery Act of 1933. It was allowed to lapse on June 16 with the end of the term set for the application of that act. It had worked on only a small scale, relatively to that of other enterprises of the New Deal. It was credited with having finished or partly built, up to its termination, 1065 dwellings and with having started 27 "projects." Of the latter, that at Houston, Texas, was regarded as a success, while the better known one at Reedsville, W. Va., was thought by some likely to become a "company town" dependent on one industry.

The President created on May 1, as a part of the "work relief" organization, the Rural Resettlement Administration, and appointed Under-Secretary of Agriculture Tugwell Administrator. This agency was charged with carrying out projects to resettle "destitute and low-income families from rural and urban areas," to deal with erosion of the soil, reforestation, and flood-control, and to finance purchases of farms. It took over the undertakings of the Subsistence Homesteads Division and a certain amount of resettlement work from the FERA.

Unlike its predecessor, the new agency started on a great scale, with several thousand employees, largely field workers in rural resettlement and "land utilization." Plans for spending \$262,000,000 were formed by the end of September; they called for restocking and re-equipping some 350,000 farms, removing up to 50,000 farming families from poor land to good, reforesting abandoned land, and providing suburban dwellings for thousands living in cities. A suburban community of cottages and apartments was brought to the stage of construction in October, at Berwyn Heights, Maryland, near Washington. Many plans, however, were still incubating at the end of the year.

Renovation of Homes. The FHA was very active during the year in writing the Government's limited insurance of payment of owners' obligations incurred for the renovation of homes. About \$351,000,000 in mortgages had been insured and placed, chiefly with banks, from the start of the plan up to the middle of April; the insuring of such mortgages continued thereafter at the rate of

\$1,000,000 or more a day. The charge for the insurance was reduced in June to one-half of one per cent per annum for all types. The FHA began the extension of its system of insurance to mortgages for the construction of new apartment buildings of low cost.

The TVA in the Courts. A decision of a Federal District Court at Birmingham (Judge Grubb) held against the TVA on February 22, in the suit of stockholders of the Alabama Power Company, which contended that the Government had no right to sell electricity in competition with private business. The Circuit Court at New Orleans reversed this decision on July 17; the stockholders carried appeal to the Supreme Court. Meanwhile the plans of the TVA for selling electricity to the communities in its area progressed and work on unfinished plants for hydroelectric power went on. The Comptroller-General delivered in May a report of his audit of the TVA's affairs for 1934, in which he challenged some of its acts (See TENNESSEE).

Controlled Markets for Securities. The main operations of the SEC in 1935 had to do with bringing about the registration of both new and already outstanding issues of securities, as conforming with the requirements previously set up. Chairman Joseph P. Kennedy of the SEC had the confidence of the financial community and preserved it by issuing divers amendments to the requirements for registration, designed to render these less onerous to those responsible. It had been widely felt that the requirements tended to discourage new financing. However, the bulk of the important outstanding domestic issues on the exchanges proceeded to comply with requirements, the chief exceptions being some leading banks' stocks and the bonds of many foreign governments. Comparatively little was done in the way of issuing securities involving the subscription of new capital; but there began early in the year a series of conversions of callable bonds of domestic companies, designed to secure to such companies the advantage obtainable from abnormally low rates for loans; and the prevalence of conversions indicated that the lack of efforts to raise new capital did not proceed necessarily from the difficulty of registering new issues.

The exchanges for securities having already conformed to the rules of the SEC, the dealers "over the counter" were ordered on May 5 to register under rules made for their control. James M. Landis, one of the authors of the Securities Exchange Act of 1934, succeeded Kennedy on September 23 as chairman of the SEC. The commission published, beginning August 23, data that certain companies had furnished but wished kept secret, as to high salaries and other emoluments of companies' officials. The termination of trading on exchanges, in securities not fully listed, was deferred in May, to May 30, 1936.

The SEC failed, up to the end of 1935, to effect compliance with the Utility Holding Act on the part of the great majority of the companies directly affected. Only three of the leading companies filed registration with the SEC by December 1, as the act required. Though the act directed that recalcitrants should be excluded from the use of the mails, the Postmaster General suspended this exclusion by an order on December 4.

Federal Trade Commission Active. In addition to assuming the work of passing upon the so-called voluntary codes for industries, for which Congress had provided in its partial salvaging of the NRA, the Trade Commission issued a series

of reports on the property and methods of the electric utility companies. These reports, made to the Senate, followed investigation extended over some six years. Highly adverse as a whole to the companies, they appeared at the time when the Administration's scheme for putting such companies under Federal restraint was on its way to enactment. They put stress on the views that regulatory bodies in many States had through laxity permitted overvaluation of companies' properties; that the concentration of ownership in great and involved capital structures tended to carry the business beyond adequate State control; that in the chief 18 of these elaborate structures opportunities had been taken to augment the stated values of assets by over \$1,000,000,000; that some companies manipulated the prices of their own securities; and that it was a common practice to charge the domestic customer too much in proportion to the industrial customer's rates.

The Ordinary Administrative Activities. Many of the ordinary branches of the administrative government were occupied largely with the furtherance of the "New Deal." Thus the Treasury, as related above, found the needed means in excess of revenue by borrowing and by other means; it also reabsorbed the agency for suppressing illicit traffic in liquor, succeeding the defunct I'ACA. The Department of State was occupied to a great extent in negotiating for treaties to expand exports and imports under plans of reciprocity. The War Department took charge of many of the Federal projects of construction, particularly of the scheme for tidal generation of electricity in Passamaquoddy Bay and that for a canal across Florida. Plans for adding to the buildings at the Army bases and for further "mechanizing" the units of the regular army were prosecuted. The Navy undertook further substantial additions to its fleet by construction in its own and in private yards.

Foreign Affairs. A difference with Canada over the sinking, by a pursuing coast-guard vessel, of the Canadian liquor runner *I'm Alone* on the high seas in 1929 was settled; in accordance with the findings of a board of arbitration the Secretary of State sent an apology to Canada on January 21, and the United States paid damages of \$50,666.50.

Treaties for reciprocal concessions in tariffs were made with Belgium and Luxemburg on February 27 and later with Brazil, Haiti, and Colombia. An agreement with Canada for extensive reciprocal concessions to promote commerce was executed at Washington on November 15. See CANADA under *History*. George N. Peek, having resigned as the President's commercial adviser, came forward to oppose this treaty as a violation of the President's campaign pledge not to reduce tariffs on products of agriculture. Commercial agreements were also executed with Honduras (at Tegucigalpa December 18) and the Netherlands (December 20). Such treaties, under the terms of the Reciprocal Tariff Act of 1934, could be made effective, so far as the United States' share in ratifying them was concerned, by the simple ratification of the President.

Negotiations for a commercial treaty with Japan were carried on, with regard to sharing the market for textiles in the Philippine Islands. Efforts were made to negotiate a more favorable treatment of American goods under the French system of tariffs. George N. Peek, acting as the President's appointed "adviser on foreign trade," reported adversely to the Secretary of State Hull's

policy of negotiating for reciprocity in tariffs, holding that the United States' creditor position rendered reciprocity useless.

Panama having refused tender of the yearly payment of \$250,000 by the United States in devalued dollars in place of those stipulated in the treaty of 1903, negotiations with Panama were carried on, to settle the dispute. It was unofficially reported on August 15 that a treaty was likely to be concluded by which the right of the United States to intervene internally in Panama would be abandoned and the system of annual rental payments to Panama "readjusted" so that Panama should receive "in devalued dollars the equivalent of the contract stipulations for the past two years, with accrued interest." See PANAMA under *History*.

The President gave instructions to the Treasury on April 1 making three classes of countries with respect to United States tariffs; in cases of the first class (Canada, Netherlands, Spain, Switzerland, and Liechtenstein) duties proclaimed for Belgium and Luxemburg were to apply for six months; for the second class (Denmark, Germany, Italy, and Portugal) such duties were to apply until 30 days after the termination of a most-favored-nation agreement; for the third class, the majority of nations, the duties were to stand only until altered.

Relations with Russia took a diverse course. On January 31 Secretary of State Hull announced the abandonment of negotiations for settling the Russian debts to the Government of the United States and to its citizens. On July 13 was signed in Moscow a Russo-American trade agreement under the terms of the Reciprocal Tariff Act. On August 25 the Department of State, through Ambassador Bullitt at Moscow, complained of the attitude taken toward the United States by the congress of the Communist International and asserted that a Russian pledge against agitation in the United States had been violated thereby. The Russian government rejecting responsibility for the acts of the International, Hull issued a public statement impugning the Russian position and indicating a prospect of impaired relations with Russia.

The situation as to the war debts owed to the United States Government remained unchanged. Secretary Hull made an apology to the German government on September 14 for remarks uttered by Magistrate Brodsky of New York City in dealing with persons arrested in a disturbance on July 26 at the docking of the liner *Bremen*. A higher scale of tariffs was ordered on September 16 (applicable after October 15) on goods from Germany. The government of Liberia, with which relations had been broken in 1930, was again admitted to diplomatic relations, on June 11. With regard to the Italian invasion of Ethiopia, the Administration applied the provisions of the Neutrality Resolution of 1935, forbidding the export of arms and kindred goods either to Italy or to the invaded country. A lease of rights to exploit for petroleum a field in Ethiopia having been acquired by the Standard-Vacuum Oil Company shortly before, the Department of State influenced the company to agree to abandon the concession on September 3, in view of the complications caused by the course of the Italian government. Though active in naval construction, the Administration retained the policy of favoring the limitation of naval forces by international agreements; the President sent a delegation of three to attend the naval conference that convened at London on December 6, to discuss the extension of agreements of this sort, which

were soon to reach the end of their term. See *NAVAL PROGRESS*; *JAPAN* under *History*.

The Army. Maj-Gen. Malin D. Craig became Chief of Staff on October 5, succeeding Major-General MacArthur, retired, who went to the Philippine Islands to organize a military force for the new government there. See *MILITARY PROGRESS*; *PHILIPPINES* under *History*.

The Navy. The naval dirigible airship *Macon*, meeting the fate of the *Akron* and other great airships, collapsed while over the ocean off the coast of California on February 12. All but two of the men aboard her were rescued. (See *AERONAUTICS*.) Under a plan of naval construction calling for 24 new war ships of various types, for which Congress had provided, bids were obtained from private yards for the building of 13 vessels. See *NAVAL PROGRESS*.

Higher Expenditures on Veterans. Retrenchment in expenditures of some sorts, for the benefit of veterans, through the Veterans' Administration had been enacted in the earlier days of the Roosevelt Administration. But grants were gradually restored in a number of directions. Consequently the expenditure upon veterans for the fiscal year ended with June 30, 1935, rose from an originally proposed \$546,505,891 to a final total somewhat above \$660,000,000. On April 30, 375,215 veterans of the World War and 102,119 dependents of such veterans were receiving monthly compensation. An act signed August 12, to operate from that date, restored current payments to certain of the veterans of the Spanish-American War, Philippine Insurrection, and Boxer Rebellion—but the sum (nearly \$40,000,000) needed for these payments in the then-current fiscal year was not appropriated.

There occurred early in the year a considerable renewed movement of needy veterans of the World War into Washington. They were removed into special camps in South Carolina and Florida (see section on the *FERA*, above).

The Postal Service. The limitation of the working time of postal employees to 40 hours a week was established. It was alleged in the House of Representatives and elsewhere that Postmaster-General Farley, procuring at their face value special sheets of stamps of distinctive character and consequent value to collectors, had made gifts of these to his friends. Collectors, who felt aggrieved, were later conciliated by permission to buy unperforated and ungummed sheets or parts of sheets of some twenty special issues at face value. About \$1,664,000 in such stamps was sold in the course of three months.

Relations with the Dependencies. A popular vote taken in the Philippine Islands (q.v.) on May 14 gave a heavy majority in favor of the constitution that had been drawn up, for a government of the Islands during an autonomous period of 10 years to precede their independence. President Roosevelt had signed this constitution on March 23. The organization of the new Philippine government proceeded, after its adoption by popular vote. See *PHILIPPINES* under *History*.

Governor Paul M. Pearson of the Virgin Islands resigned the post to accept a position in the PWA. He was succeeded in July by Lawrence W. Cramer, advanced from the post of Lieutenant-Governor of St. Croix. Pearson, as Governor, had met with opposition from part of the population of the Islands and had had differences with Paul Yates, administrative assistant, who after being discharged carried complaints to Washington in April. Yates's activities were followed by an in-

vestigation ordered by the Senate, which reported nothing to Pearson's discredit. See *HAWAII*, *PUERTO RICO*, and *VIRGIN ISLANDS* under *History*.

Relations with the Railroads. The Interstate Commerce Commission rejected on March 30 an application of the Class-I railroads for a general increase of 10 per cent in freight rates, intended to raise their revenues by some \$170,000,000 yearly; it granted temporary surcharges, applicable until June 30, 1936, on carload traffic, designed to raise revenue by \$85,000,000. The Supreme Court in a decision of May 6 held the Railroad Retirement Act of 1934 unconstitutional (See *JUDICIARY*, below). This ended the effort to put the act into operation. Coordinator of Transportation Eastman in an address to the Railway Labor Executives Association on January 12 warned that the railroad unions' demand for a six-hour day would wreck the railways; but the unions' executives stated that they would nevertheless continue efforts to gain a six-hour day through Federal legislation. Eastman announced on August 1 that an investigation of pay in the railroads' employ in 1933 had shown 15 per cent of the employees to have been receiving 35 cents an hour or less. The Chicago and Northwestern and St. Paul systems were among those to enter bankruptcy under Section 77 of the amended Bankruptcy Law. See *RAILWAYS*.

Boulder Dam Finished. Boulder Dam, an enterprise begun in 1930 under the Hoover Administration, was completed by February 1 to such a point that the gate barring the passage of the main current of the Colorado River could be shut. The lake above the dam rising slowly, attained a length of some 84 miles, a depth at the dam of 286 feet, and about one-seventh of its full volume of water by July 21. President Roosevelt dedicated the dam on September 30. The hydro-electric generating plant at the dam was brought near to completion. Construction of a \$220,000,000 aqueduct by the cities of southern California to bring water from the river to the Pacific coast, over a distance of 259 miles, made progress. The building of the dam itself was performed by a contracting firm. The cost of the dam and hydro-electric plant was stated by the President in his dedication as \$108,000,000, which the Government expected to defray gradually, with interest, out of the sale of electricity.

Events Bearing on the Constitution. The Legislatures of four more States, in the regular legislative sessions of the early months of the year, voted ratification of the proposed Child-Labor amendment to the United States Constitution. This brought the number of ratifications up to 24, or one-half of the number of all the States. However, 16 States' Legislatures, in the three months ended with March, refused to ratify. The ratifying States of 1935 were Idaho, Indiana, Utah, and Wyoming.

Remarks made by the President to the press, in his commenting on the Supreme Court's overthrow of the NRA, were widely taken to signify that he favored altering the Constitution in favor of the "New Deal." Several proposals of amendments to remove or lessen the court's power to invalidate acts of Congress, or to extend the Federal powers, were introduced in Congress. Some of the supporters of the Administration, notably Senator Norris of Nebraska and Governor Earle of Pennsylvania, came out to urge Constitutional amendment. Senator Borah, in a public speech by radio delivered on June 2, defended the sufficiency of the Constitution in its actual form and attacked

the impulse to amend in haste. Many Republican leaders and organizations declared against sweeping amendments to promote new theories of government. On the other hand, at the convention of the American Federation of Labor in October, an effort to commit the Federation to the support of a proposal to amend the Constitution so as to allow freer legislation for the benefit of the labor interest received strong backing.

CONGRESS

Only one session of Congress was held: the first regular session of the Seventy-fourth Congress. It convened on January 3 and adjourned on August 26. Its exceptional duration, eight months less one week, exceeded that of any previous session of Congress during the Roosevelt Administration. Although the Democrats had a sweeping preponderance in both houses, differences within the majority occasioned long delays in business; the session was further protracted by the need, arising at the end of May, for enactments to cover the situation brought about by the Supreme Court's invalidating the NRA; and about the time when the session had hoped to adjourn, the President, under considerable pressure from radical advocates of the redistribution of wealth, presented recommendations calling for taxes calculated to dissipate great fortunes and handicap great corporations. The Seventy-fourth Congress was the first to start its term in January under the Twentieth Amendment.

Composition and Organization. The Senate was composed of 69 Democrats, 25 Republicans, 1 Farmer-Labor member and 1 Progressive. But the Sixty-ninth Democrat, Rush D. Holt of West Virginia, elected though not of the qualifying age, was admitted only on attaining the age of 30 years in June. Senator Bronson Cutting (q.v.) of New Mexico, Republican, died in the wreck of an aeroplane on May 6, and Dennis Chavez, who had been his Democratic opponent in the election of 1934 and had contested the seating of Cutting, succeeded to the seat by appointment *pro tempore*.

The House, as assembled, held 322 Democrats, 102 Republicans, 7 Progressives, and 3 Farmer-Laborites; there was one vacancy. The Republicans, even to include those of progressive tendencies, could muster only about one-fourth of either house.

Joseph W. Byrns of Tennessee was elected Speaker of the House of Representatives; William B. Bankhead of Alabama was chosen majority leader in the House; in the Senate, Robinson of Arkansas was retained as majority leader. The Republicans chose as leaders McNary of Oregon in the Senate and Snell of New York in the House. The rule that the House had adopted in 1931 when the Democrats first took control, to require a committee to release any bill for the House's consideration when 145 members should so demand, was changed on January 3, by vote of the Democrats. It was made necessary for a majority to demand a bill in order to bring it out of committee against the committee's will. This latest change favored control over legislation by the central group of the majority, in touch with the Administration, just as the rule of 1931 had worked to weaken the legislative influence of the Republican Administration.

Chief Bills Before the Session. An unusually great number of measures for the advantage of employees, unionized or other, were enacted. These included the Wagner-Connery Labor Relations Act, the Guffey-Snyder Bituminous Coal Control

Act, the Wagner Social Security Act, the McKellar-Mead 40-Hour Postal Act, the Wagner-Crosser Railroad Retirement Act, the Summers-Ashurst Act limiting commerce in prison-made goods, the Bland Act requiring ships to have crews two-thirds composed of citizens in order to hold mail contracts, and the NRA Extension Act. The chief enactments for the farming interest were: the AAA Amendment Act, the Farm Credit Act, the Frazier-Lemke Farm Mortgage Act, the Rice Amendment Act, and the Tobacco Inspection Act.

Measures to strengthen the Federal control over divers kinds of commerce included: the Air Mail Act, Banking Act, Federal Alcohol Control Act, and Petroleum Act. Measures affecting the Federal undertakings for the welfare of the social masses, other than the laboring and farming groups, included the Work Relief Act and the Tennessee Valley Act. In the field of taxation were passed a Wealth-Taxing Act, a measure extending the duration of the so-called nuisance taxes, and one repealing general publicity for the incomes of persons paying the income tax. Measures affecting Federal debt were a Gold Clause Act, withdrawing the Government's consent to be sued in cases arising from the abrogation of its undertaking to pay gold, and an act increasing the allowable maximum of outstanding Federal public debt to \$45,000,000,000.

A Neutrality Act was passed to require and regulate neutrality in foreign wars. Congress also extended the life of the RFC, the office of Coordinator of Transportation, and the Emergency Railroad Transportation Act of 1933. It aided debtors not only by the Frazier-Lemke Act but by a Home Mortgage Relief Act (rendering the Home Loan Bank Act more liberal) and a Railroad Reorganization Act. It passed, but the President vetoed, a bill for immediate payment of the soldiers' bonus. It failed to pass, of the chief measures sought by the Administration, the Walsh bill to require observation of the invalidated NRA codes in the performing of contracts with the Government; a bill to substitute, for the so-called mail contracts, outright subsidies to shipping; a measure to regulate exchanges dealing in commodities; the proposed adherence to the World Court; the Third Deficiency bill (carrying appropriations for divers agencies of the Government); and a bill to strengthen the Food and Drug Act. Salient particulars as to leading legislation appear below.

Social Security Act. This act was signed by the President on August 14. Its primary objects were two: to provide for establishing, in cooperation with each of the States, systems in the States for the payment of support to the needy aged and to pay sums to persons during limited periods after their losing employment; provision was also made for Federal aid towards States' aid to needy dependent children, States' care for mothers and their children, for crippled children, for neglected children, for the vocational rehabilitation of the disabled, for health-service agencies, and for the blind. The purpose as to old-age pensions was to be effected in the first place by the Government's matching States' allowances to needy persons over the age of 65 years, up to \$15 a month for each case. Independently, a special income tax on employees and a tax at an equal rate on the payrolls of employers was to be levied, starting in 1937 at 1 per cent and rising by steps to 3 per cent in 1949, to provide a permanent fund out of which, not before January 1, 1942, qualified employees retiring at 65 would receive to the end of life payments at

from \$10 to \$85 a month. States seeking Federal aid for their pension plans must conform, as to these, with requirements that the act set up. To help States pay allowances to persons losing employment, the act created a separate tax of 1 per cent the first year, 2 the second and 3 thereafter, on employers' payrolls, starting with the payrolls of 1936. Out of a fund built up from the proceeds of this tax and invested by the Treasury in Federal obligations, States that conformed with stipulated requirements were to receive aid toward their payments to the unemployed. Employers paying into a compulsory State fund for providing allowances to the unemployed were to receive Federal credit therefor, at the rate of 90 per cent. The Government was thus to distribute up to \$90,000,000 a year after 1936.

The bill was introduced on January 17 and strongly recommended in a Presidential message. In the House it was the target of advocates of more sweeping redistribution of usufruct, particularly supporters of the Townsend plan for high old-age pensions, who sought to implant their scheme in the bill. This effort failed. But the House made extensive amendments, in one of them removing the system's proposed controlling board from the Department of Labor. The Senate discarded this and other amendments from the House. It then adopted an amendment from Senator Clark to permit alternative voluntary industrial pension systems after the Wisconsin practice. The bill in this form went to conference. Obligated to abandon the House's amendments the House's conferees rejected the Clark amendment, which originators of the bill held incompatible. There followed a deadlock through July and the first days of August, but the Senate finally ceded, and the act went to the President on August 9. It differed from its original form in having been shorn of a provision for allowing workers, through the Government, to buy annuities for their latter years, at higher rates of payment, to them, than those in the contributory pension plan. The law was attacked in some quarters as creating what would in effect be a heavy sales tax.

Guffey-Snyder Bituminous Coal Stabilization Act. This act was signed on August 30, after having been urged through Congress by the influence of the Administration, which wanted operators of bituminous coal mines in the Appalachian area to come to an agreement for a new term with their organized employees, who threatened a strike. In a letter to Hill of the House's committee on ways and means, heading a subcommittee then considering the measure, the President wrote on July 5: "I hope your committee will not permit doubts as to the constitutionality, however reasonable, to block the suggested legislation." The provisions of the act followed in great part those of the bituminous-coal code that had been set up under the later-invalidated NRA. A National Bituminous Coal Commission was created and was required to administer the act and, particularly, to establish a code for the industry, embodying mandatory features detailed in the law. These included price-fixing provisions and a reenactment of Section 7-b of the Recovery Act, obliging the employers to accept labor organizations and negotiate with representatives of their employees' "own choosing." A Bituminous Coal Labor Board was created, to oversee labor relations, adjudge disputes and mediate. A tax of 15 per cent on the selling price or market value of soft coal produced was imposed on producers, but was remitted to the extent of nine-tenths

in the cases of producers filing acceptance of the code; thus producers had nominal liberty to stay out but must pay heavily if they did not conform.

Wagner-Connelly Labor Relations Act. Signed July 5, this measure was designed to satisfy the complaints of labor organizations against the provisions of the Recovery Act of 1933 as it affected them and also remedy their disappointment at losing the advantage of these provisions by the invalidation of that act. Enacted with the Administration's consistent support, the measure declared a policy of the United States to encourage collective bargaining and protect employees' freedom of self-organization, and their negotiating as to their employment through representatives of their own choosing. A new National Labor Relations Board was created, to consist of three members appointed for staggered five-year terms by the President with the approval of the Senate, removable only for "neglect of duty or malfeasance in office"; the board was charged to report yearly to Congress as well as to the President. The apparent effect was to substitute for the previous boards (serving largely at the executive pleasure) a body independent of other branches of the Government. A representative "designated or selected for the purposes of collective bargaining by the majority of the employees" in an employing unit was to be the exclusive representative of all the employees; the said "unit" might be "the employer unit, plant unit, or any subdivision thereof," and the board was to decide which unit should be adopted, "in each case." It rested with the board to stop any of an enumerated list of "unfair practices" (on the part of employers). It was empowered to ask any Federal court of appeals to enforce its orders; it could issue subpoenas for witnesses and the production of evidence. Nothing in the act was to interfere with "the right to strike."

Resolution Extending the NRA. As signed on June 14, this resolution extended the existence of the NRA until Apr. 1, 1936, or till terminated by earlier Presidential order; but merely as a much-reduced agency to be occupied largely with collecting the data as to the operations of the original NRA. Thus the name and part of the staff were kept in being, as of possible use in case any way should come for restoring some of the authority provided in the original plan. The delegation of power to the President, in the act of 1933, to prescribe or approve codes and to enforce them on groups engaged in the several kinds of commerce was repealed. For such of these groups as should voluntarily, through specified process and Federal agencies, bind themselves to codes preserving the main requirements of the old NRA codes as to employees and as to competitive practices, the provisions of the act of 1933 granting immunity from contrary features of the anti-trust laws were extended.

Prior to the Supreme Court's decision against the NRA, the chances of the passage of legislation, then pending, to extend the old act beyond its date of expiration (June 16) had been in some doubt. The Senate adopted on May 14 a provision for extending the old act only 10 months, and the NRA's critics in the Senate threatened to filibuster until the old act expired unless House and Administration yielded.

Wagner-Crosser Railroad Retirement Act. Signed August 29. Passed at the close of the session, this measure endeavored to accomplish with better regard to constitutionality the main purpose of the Railroad Retirement Act of 1934, which the

Supreme Court had overthrown. The new act created annuities for railroads' employees retired at the age of 65, to start with the date of the act's going into effect, Mar. 1, 1936; the annuities were to be payable out of the Treasury. An independent Railroad Retirement Board was created, to administer the act and to make a special report within four years on desirable changes in the system. A special investigating commission (3 Senators, 3 Representatives, 3 Presidential appointees) was provided, to recommend a system for the retirement of railroads' employees to Congress on Jan. 1, 1936. The imposition of taxes on the railroads and on their employees, to provide the money for paying the annuities, was left to a separate bill.

Agricultural Adjustment Act of 1935. Signed August 24. This measure amended the original Agricultural Adjustment Act in such wise as seemed likely to protect it from going the way of the NRA as unconstitutional. This was done by obviating previous apparent delegations of the legislative power, restricting the control over agriculture to the field of interstate and foreign commerce, and giving legislative ratification to prior acts of the AAA which might otherwise be considered to invade the legislative field. Subsequent suits for injunctions in the Federal courts, to halt the collection of processing taxes, were prohibited; suits to recover processing taxes already paid were limited to claimants who should previously present proof that no part of such payment had been shifted to the grower or to the purchaser of the processed goods.

Apart from these provisions concerned solely with the court room, the measure contained features of broader application. It authorized a plan for promoting the storage of grain and like non-perishable farm products by the farmer—a scheme known by its advocates as the "ever-normal-granary plan," involving loans on crops stored on the farm. Quotas for foreign agricultural products were authorized in cases where such products threatened to harm the prices for the domestic articles. The old scheme of "export debentures" was echoed in a provision allowing the diversion of 30 per cent of the yearly duties on imports into subsidies for the exportation of domestic farm products. The fixing of prices was abandoned except in the case of milk. The methods of enforcing marketing agreements were altered, by doing away with the licensing system for handlers and granting direct administrative power to compel observance of such agreements.

The Senate inserted into the measure, and the House accepted with slight alteration, an ambitious scheme for control over the production of potatoes, which did not have the backing (as did the original bill) of the Administration. The act as signed included this provision. It required the Secretary of Agriculture to determine what commercial crop of white potatoes would cause the sales to the growers an income equal in purchasing power to that of the years 1919-29; he was then to allot the determined quantity among the States. Tax-exempting stamps were to be issued to farmers up to allotted quantities; potatoes sold in excess of those covered by these stamps were to bear internal revenue stamps at the rate of three-fourths of a cent a pound. Not only sellers but also buyers were made liable to imprisonment and fine up to \$1000 for buying unstamped potatoes. The failure of Congress to appropriate for the administration of potato control left the plan without financial support. It was to apply first to the crop of 1936.

Farm Credit Act. Signed June 3. This act rendered more liberal the loans that the Land

Bank Commissioners might make to farmers by earlier enactment. They were allowed to lend upon liens (first or second) upon real property for terms up to 43 years. The time in which such loans might be granted was extended until Feb. 1, 1940, the limit of \$600,000,000 on the aggregate was removed from the bonds of the Federal Farm Mortgage Corporation, issuable against such loans, the purposes for which the Land Bank Commissioners' loans could be made were expanded to coincide with the purposes for which loans from the Federal Land Banks were allowed, the rates of interest on the loans of the latter banks were reduced to 3½ per cent for a year, starting with July 1, 1935, and 4 per cent for two years thereafter, and the Federal Intermediate Credit banks were allowed to issue consolidated debentures in substantially the same manner as the Federal Land Banks.

Frazier-Lemke Farm Mortgage Act. Signed August 29. The act was designed to mend the previous Frazier-Lemke Act, which the Supreme Court had found unconstitutional. The new act allowed a farmer unable to obtain composition or extension on his mortgage, or dissatisfied with the creditor's offer, to apply to a court, that it judge him bankrupt but allow him to retain possession of his property under the court's supervision and control. The courts were authorized to grant such a petition for the duration of three years and to stay proceedings against the farmer debtor for that time. The bankrupt was to be required to pay the court a "reasonable" rental. Out of this the court was to pay taxes in the first place and next, but still before the creditors, the cost of upkeep. An appraisal having been made of the property within the three years, the debtor was to be allowed to regain full title and discharge incumbrance by paying either the appraised sum or the debt, whichever was the smaller. Alternatively, if the court should put the property at auction on the request of a creditor, the mortgagor might redeem it in 90 days after sale by paying the purchaser's price and interest at 5 per cent.

Soil Erosion Act. Signed April 27. Though it drew little attention when passed, this measure provided the rudiments of a system under which Congress might find it possible later to restore Federal restrictions upon cultivation of the soil, in case that the AAA should be overthrown in the court. See SOILS.

Emergency Relief Appropriation Act of 1935 ("Work Relief"). Signed April 8. This was one of the earliest of the session's leading measures. "In order to provide relief and work-relief and to increase employment by providing for useful projects," it appropriated \$4,000,000,000 to be used, nominally, at the President's discretion. It further appropriated unexpended balances of several earlier appropriations (aggregating, as commonly estimated, \$880,000,000) for the President's use to the same purpose, but with certain limitations. The President's "discretion" in dispensing the entire sum was restricted thus: not over \$800,000,000 of the total was to be spent for highways, streets, and the elimination of grade crossings; \$500,000,000 for rural rehabilitation, aid to sufferers in "stricken agricultural areas," conserving water, diverting it through mountains, irrigation, and reclamation; \$100,000,000 for rural electrification; \$450,000,000 for housing; \$300,000,000 to aid persons in the educational, professional, and clerical classes; \$600,000,000 for the CCC; \$900,000,000 for loans and grants to States, Territories, possessions, and their subdivisions, for projects, and to their public bodies for self-liquidating projects, where at least 20 per

cent of the loan or grant would be spent for work; \$350,000,000 for sanitation, prevention of erosion of the soil, or of the pollution of streams or of erosion of the seacoast, reforestation, forestation, control of floods, work on rivers and harbors, and miscellaneous undertakings. The President, however, was left at liberty to increase any of these maxima by 20 per cent. No part of the sums appropriated in the resolution was to be spent for munitions, war ships, or military or naval material. Appropriations were to remain available until June 30, 1937.

The original bill, as supported by the Administration, was introduced in the House on January 21; it bore recommendations occupying a great part of the annual message (January 4) of the President, in which he stated the object of putting 3,500,000 needy persons to work, and so superseding the doles of the FERA. As introduced, it did not put the maximum allotments on the eight classes of work set in the final act. Rushed through the House with little change on January 24, it encountered difficulties in the Senate. There it acquired the restrictions put on the President's discretion by the maximum allotments to classes of work. The influence of the A. F. of L. was exerted, to the result that the Senate voted an amendment requiring the payment of "prevailing wages" in divers types of work to be provided under the plan; the Senate in a later vote rescinded this action. It also rejected amendments greatly to increase the appropriation and greatly to reduce it.

Tennessee Valley Authority Amending Act. Signed August 31. The act had for its most significant feature the explicit granting of power to the TVA to sell its surplus of electricity generated, over the quantity needed for Federal use; this power had been denied to exist in the TVA, by a Federal Court, in suit for an injunction. The act rendered it legal to sell to States, counties, municipalities, and non-profit-seeking organizations within transmitting range. The construction of the projected Norris, Wheeler, and Pickwick Landing Dams was affirmed to be necessary in the development of the Tennessee River for navigation, control of floods and production of electricity; and construction of other dams to the same purpose, such as would provide a 9-foot channel from Knoxville down, was authorized. The TVA was permitted to regulate rates at which its electricity should be resold. It was allowed to acquire existing facilities for serving farms and villages. The Comptroller-General was restricted in making his reports on audits of the TVA; that body was to have time to "examine the exceptions and criticisms" in his reports and make rejoinder before reports became public.

The passage of this measure involved conflict, in the House's committee on military affairs, to which the bill had been committed. A report of the Comptroller-General, considered by the committee, indicated that the TVA had not conformed with regular practice in computing depreciation, but had set this charge at an unduly low ratio to its plant. The matter was vital, as it bore on the question whether the TVA would, and should, sell electricity below cost. The committee was unable to give even a bare majority to the bill wanted by the Administration and passed by the Senate; it therefore reported a bill (by vote of 13 to 12) that accorded the power to sell electricity but put the TVA under restrictions in several other respects. The House later, by amendments, restored the measure substantially to its original shape.

Banking Act. Signed August 23. This act made fundamental changes with regard to the Federal Reserve Board, allowed National banks to make to limited aggregates first mortgage loans on real estate to run five years, and rendered permanent the FDIC's previously temporary system of insuring deposits in banks up to a maximum of \$5000 a deposit. In place of the existing Federal Reserve Board was substituted a Board of Governors of the Federal Reserve System. The Secretary of the Treasury and the Comptroller of the Currency were to be dropped from membership in the new board on Feb. 1, 1936. Its seven members were to be appointed by the President, to serve 14 years, at salaries of \$15,000 a year. The existing governors of the several Federal Reserve banks, who were not the governors in the new agency, were to be renamed presidents. The seven members of the new board and five annually and regionally elected representatives of the 12 Reserve banks were to form, from Mar. 1, 1936, a Federal Open Market Committee having power to direct the purchase and sale of Federal obligations in the open market, through the Reserve banks, which were obliged to follow the committee's orders as to such transactions. The new board was not empowered to lower the existing ratio of reserves to deposits, for the several classes of banks, of 7, 10, and 13 per cent, but it was allowed to raise them to double these figures.

The issue of the composition of the Federal Open Market Committee and its power to inflate or deflate credit through dealings in the Government's securities was fought out in the Senate's committee on banking. The House had passed a measure giving such power to the new board directly, thus rendering control of credit subject to Presidential influence in a high degree. Glass of Virginia, heading a subcommittee, was largely instrumental in causing the board to share its power of buying and selling in the open market with representatives of the Reserve banks and in lengthening the terms of the board's members sufficiently to render them less sensitive to executive pressure. The bill also provided that the Treasury might extend credit to the FDIC in case of need and that member banks might again underwrite issues of securities, to a limited extent; it forbade a banker's serving on the boards of more than two banks.

Petroleum Act. Signed February 22. Designed to fortify States' proration of the production of petroleum in their territory, this act prohibited the transportation of contraband petroleum from the State of its origin, on pain of confiscation. The President was permitted to raise the prohibition whenever he should find the supply of petroleum and its products insufficient for the demand.

Motor Carrier Act. Signed August 9. Desired by the Administration, this measure extended over the motor vehicles engaged as carriers in interstate commerce a form of Federal control similar to that long exercised over the railroads. Such vehicles, except those transporting exclusively livestock, fish, agricultural commodities, or newspapers, were subjected to the authority of the Interstate Commerce Commission, to start with any date within six months from October 1 that the Commission might set. Certificates of convenience and necessity were to be requisite to operation. The act required that reasonable rates of charge be maintained, subject to regulation. Finances of carriers were subject to regulation, as to mergers, securities, and reports; labor was likewise to be regulated.

Air Mail Act. Signed August 14. This act dealt further with the requirements of the situation of

the carriers of mail by aeroplane under Federal contract, as left after the Postmaster-General's cancellation of contracts in 1934. It retained the maximum rates that the act of 1934 had fixed for carriers, but it assigned the work of determining "fair and reasonable" rates to the Interstate Commerce Commission. The power to cancel contracts also was vested in the Commission. This body was directed to report to Congress by Jan. 15, 1936, whether fair rates on certain lines would exceed the statutory maximum. Limits of route mileage and of aeroplane mileage were increased, the initial periods of carrying contracts raised to three years, from one year, the number of primary routes made "at least three," instead of four, and a minimum of 750 miles was set for a primary route.

Alcohol Control Act. Signed August 29. The administration of Federal control over commerce in alcoholic beverages was transferred from the old FACA to a new Federal Alcohol Administration, headed by a single Administrator and forming a division of the Treasury Department; this was against the design of the President's advisers, who had by report sought the creation of a board of several men, at least partly independent of the Treasury. The Act further rendered it unlawful to make bulk sales of liquor to the general public and set a gallon as the greatest unit of containers allowable in such sales. This restriction had for its purpose the checking of improper bottling and branding. The importation, distillation, production, blending, and bottling, as well as the wholesale purchase, of alcoholic beverages, was restricted to holders of Federal permits. The act thus replaced the system of codes, invalidated by the NRA decision, with a new scheme of control based on divers clauses of the Constitution.

Public Utility Holding Company Act. Signed August 26. This act had as its purposes: (1) doing away with holding companies among the public-utility enterprises serving communities with electricity and other products, except where such companies might be needful; (2) regulating the operations of remaining holding companies and their relations with the subsidiary companies that they controlled. The Federal Power Commission was made the administrative agency for these purposes. It was charged to proceed after Jan. 1, 1938, to limit each holding-company system to "a single, integrated public-utility system," save for minor and appropriate transgressions of the exact limit.

However, it was to make exceptions in favor of a holding company's plural system or systems if these would suffer loss of economics by reason of segregation, if systems were all in one State or in adjoining States, and where the combination of systems was not too great to admit of localized management, efficiency of operation, and effective regulation. The commission was required, further, to terminate the holding, by a holding company, of control of a company that itself held the stock of a holding company—thus intently reducing the number of superimposed stages in the structure of systems. Holding companies were required to be registered, to file reports, and to follow the Commission's rules as to accounts, costs, competitive bidding for purchases, and disclosure of interest.

The issue of the "death sentence," as the provision for the breaking-up of holding companies was generally called, produced a conflict that persisted almost throughout the session. Interests identified with some public-utility systems brought pressure to bear early in the session, with a view to defeating the bill. The measure's supporters were

headed by the President, who sent a message to Congress on the subject on March 12, denouncing the criticized holding companies as "private empires within the Nation" and their efforts to check Congress as lobbying. Making no outright denial of the right of the citizen to seek the ear of the legislator, the friends of the measure promoted an investigation of the "utility lobby" through a special committee of the Senate. This committee occupied itself largely with the Associated Gas and Electric Company and with Howard C. Hopson, that company's controlling personality. A former manager of a telegraph office at Warren, Pa., testified that telegrams of protest against the bill had been sent in great number and signed with names taken from a local telephone directory; the originals of such telegrams had been destroyed. An employee of a subsidiary of the Associated Gas and Electric Company at Erie, Pa., testified that he had received orders to destroy pertinent records at the outset of the investigation. The Treasury, by order of the President, opened its records of personal incomes for the use of the investigating committee. It was reported that the Senate's committee had found record of \$700,000 expended by the Associated system to oppose the bill and of \$300,000 spent to the same end by the Committee of Public Utility Executives. While the disclosures of the Senate's investigators related to but a comparatively small number of companies, they tended to render the Capitol adverse to representations from the utilities' friends. The House, however, remained opposed to the Senate's more radical version of the "death sentence." The bill as ultimately enacted was a compromise between the two chambers.

Wealth-Tax Act. Signed August 30. This act was the response of Congress to the recommendation made by the President in his special message of June 19 that the Federal power of taxation be used as a weapon against "unjust concentration of wealth and economic power." The measure increased the surtaxes on individual yearly incomes of \$50,000 and over that had been set by the Revenue Act of 1934. The new rates ran, by a scale, from 31 per cent on the immediate excess of net income over \$50,000 to 75 per cent on excess over \$5,000,000. The income taxes on corporations were lowered for small incomes and were set at 14 per cent on income between \$15,000 and \$40,000, and at 15 per cent on income in excess of \$50,000. Limited deductions from a corporation's taxable income were allowed for contributions to charity. Taxes on corporations' excess-profits were imposed at 6 per cent of excess over 10 per cent of declared value and rose to 12 per cent of excess over 15 per cent of declared value. The tax on decedents' estates was set at 2 per cent on a net estate of \$10,000 and by a series of rises in the rate on the marginal amount, took 26 per cent of the initial margin over \$600,000, 50 per cent of that over \$4,000,000, and so on, to 70 per cent of all excess over \$50,000,000. The tax on gifts was elevated conformably, to three-fourths of that on estates. The tax on capital stock was increased in conformity with that on excess-profits. Holding companies for large fortunes were more heavily taxed and exemption from income tax on dividends from company to company was restricted. The act did not tax inheritances, as the President had intended.

An effort was made by the Administration's chief supporters in Congress to rush a wealth-taxing measure through as a rider to the bill prolonging the "nuisance taxes," which were deemed necessary

and which were to expire June 30; but this move lacked support. In the end the measure was considered separately and with some approach to deliberation. It covered the main points of the President's recommendations, except for inheritance taxes (taxes on the recipients of estates or portions thereof). The House voted such taxes but the Senate voted higher taxation of decedents' estates instead, and the Senate prevailed on this point. All legislative action on the bill was taken amid the political situation brought about by the manifestations of popular approval of Huey Long's agitation for the distribution of wealth.

Repeal of Income-Tax Publicity. A joint resolution passed in April repealed the requirement of the Revenue Act of 1934 that individuals' statements of income must be open, as to certain main points (declared with the return, on a special "pink slip"), to public scrutiny. The resolution provided, however, that the information should be available to the taxing authorities of States, on request from the Governors of the respective States.

Doughton Debt-Limiting Act. Signed February 4. This act served two main purposes: (1) to increase the permissible total of Federal bonds that might be outstanding at one time; (2) to limit the permissible total of Federal shorter-term paper. The Secretary of the Treasury was allowed, with the approval of the President, to issue for the usual authorized purposes bonds of which the total should not exceed \$25,000,000,000 at any one time; the previous limitation of \$28,000,000,000 had applied to the total of all successive issues, even though some of the issues had merely retired others. As to certificates of indebtedness, Treasury bills, and United States 1-to-5-year notes, their combined total outstanding at any one time was limited to \$20,000,000,000, of which the first two categories must not exceed \$10,000,000,000. The act also authorized the issue of United States Savings Bonds (see *Popularizing Federal Issues under Administration* above).

Gold Clause Act. Signed August 28. By this act the Government denied to its creditors the right to seek, through its courts, to compel it to perform its abrogated promise to pay certain of its funded debts in money of equal value, in terms of gold, to that which it had borrowed. The President asked for such a measure in a special message of June 27. The measure as introduced would have withdrawn immediately the Government's consent to be sued on its gold obligations. Adverse sentiment in the Senate forced a compromise, eventually adopted, by which the withdrawal of consent to be sued was to become effective only on Jan. 1, 1936. To offset risks of the institution of suits there was incorporated in the act a requirement that the Treasury redeem until July 1, 1936, at par and interest (in the devalued new currency), any Federal securities carrying the gold clause that might be presented. This move was designed to preclude or hinder allegations of substantial damage on litigants' part.

Neutrality Act. Signed August 28. This act, limited in its operation to six months ending with Feb. 29, 1936, laid down a course for the Administrative branch to follow in the maintenance of neutrality toward foreign belligerents. The President was directed to proclaim the fact when a state of war abroad existed. Upon this proclamation it was to become unlawful to export arms and munitions to the belligerent states directly or indirectly, under pain of fine up to \$10,000 and imprisonment up to five years. A National Munitions Control Board

consisting of the secretaries of State, the Treasury, War, the Navy, and Commerce was created to make rulings as to munitions. Manufacturers of arms were required to register with the Secretary of State, paying a fee of \$500 each, as a prerequisite to exporting their goods. The President was authorized to warn citizens not to travel on the vessels of a belligerent, save at their own risk.

Congress and the Soldiers' Bonus. A Patman Bonus bill, somewhat similar to that of 1934, failed by a narrow margin to become a law over the President's veto. The bill required immediate payment of the adjusted service certificates that the veterans of the war had received from the Government in 1925 and that were to mature in 1945; it thus would have donated to the holders of these certificates the difference between the value of immediate payment and that of payment deferred for some 10 years. The cost of this proposed course, to the Government, was estimated as likely to be somewhat over \$2,200,000,000 in addition to the accruing special fund to meet ultimate payment.

The bill proposed to cover this excess by the issue of United States notes not bearing interest ("greenbacks"). This proposal earned it the support of a considerable group in Congress that favored inflation of the currency; on the other hand support for the bill was somewhat split by a rival bill, which proposed immediate payment without inflation (Vinson bill). The House passed the Patman bill on March 22 by 318 votes in favor, to 90 opposed. The Senate, after considering other plans of immediate payment, passed the Patman bill May 7 by 55 votes to 33 on the roll call; the majority included 43 Democrats, 10 Republicans, 1 Progressive, and 1 Farmer-Laborite.

The President in vetoing the bill took the unprecedented course of going before Congress and delivering his veto *in propria voce*. This was done on May 22, in a discourse of some 5000 words. The purpose of the President's taking this step was stated to be the reaching of the public by radio, the speech being broadcast. The House immediately overrode the veto by 322 votes to 98. The Senate, voting next day, gave 54 votes for overriding the veto and 40 for sustaining it. Norbeck, announced as for overriding, was the sole absentee. The majority, even with his vote, would have lacked nine votes of the necessary two-thirds. The proposal accordingly failed of adoption.

Total of Appropriations. Chairman Buchanan of the House's committee on appropriations estimated that the entire amount appropriated by the session would be \$10,250,000,000. This estimate, made at adjournment did not reckon the Third Deficiency Bill. That bill, carrying some \$93,000,000 for divers authorized uses, had remained unpassed at adjournment; it had been saddled with provisions for governmental loans on cotton at 12 cents a pound and loans on wheat. The \$4,000,000,000 for "work relief" and the \$2,200,000,000 of yearly recurring appropriations made the bulk of the appropriated total.

JUDICIARY

Supreme Court. The Court in a series of decisions of exceptional import overthrew in whole or in part a number of the legislative and administrative acts of the New Deal. These included the National Industrial Recovery Act, the administrative control over petroleum established under that act, the Federal system of pensions for employees of railroads, the Federal moratorium on farm mortgages, and the executive power of removal

as exercised against a member of the Federal Trade Commission. The validity of the repeal of the gold clause was sustained as applying to private and to public non-Federal obligations and as to Federal currency, but was found invalid as to the bonded debt of the Federal Government. In some of these adverse decisions the Court was closely divided, part of the time into what had been considered the liberal and the conservative groups; in others the Court was unanimous in condemnation.

The Gold-Clause Decisions (February 18). There were four cases. Two (*Norman vs. Baltimore and Ohio Railroad* and *United States vs. Bankers Trust Company*) had to do with railroads' bonds; a third (*Nortz vs. United States*), with gold certificates of the Treasury; the fourth (*Perry vs. United States*), with Liberty bonds. An opinion of five Justices in the two cases of private debts, written by Chief Justice Hughes, held that the Government had power to override private contracts such as the gold clauses in private bonds, and that the Government could do this even in regard to States' and municipalities' contracts. In the third case the court held (opinion by Chief Justice Holmes) that the holder of a gold certificate was not entitled to receive for it from the Government more than its face value in existing currency at the time (before statutory devaluation) when surrender had been made in this case; that as the possession of gold was prohibited, he could not have kept the gold had he received it. The opinion held it needless in the actual case to pass upon the questions whether the certificate was a contract actionable in the Court of Claims and whether the compulsion to surrender the gold certificate was a taking of property under the Fifteenth Amendment. These questions therefore remained open.

In the *Perry* case, four (Hughes, Brandeis, Roberts, and Cardozo) held that Congress had no constitutional power to "withdraw or ignore" the United States' pledge of its credit. While this view seemed to nullify the repudiation of the gold clause in Federal bonds, the opinion (written by Chief Justice Hughes) rendered the gain to the holders of these bonds nugatory by further declaring that since no "actual loss" in purchasing power had been proved by the plaintiff, he was not entitled to receive more currency than the face of the bond, having failed to show cause of action. Stone concurred as to the nonsuiting of *Perry*; he dissented from the view that Congress lacked power to abrogate its gold obligation, when this was a stipulation in its pledge of credit.

The "conservative" minority of four (McReynolds, Van Devanter, Sutherland, and Butler) on the contrary, held the abrogation of the gold clause unconstitutional with regard to all the four cases alike. The minority's opinion (by McReynolds) denied that there existed "any definite delegation of power" in the constitution for what was in effect "repudiation and spoliation of citizens."

The effects of the decisions were: (1) to overthrow all contentions of the legal validity of claims for payment in gold or in dollars of value equivalent thereto, under private and apparently State contracts of debt; (2) to overthrow all such claims, as based on the governmentally-forced surrender of gold certificates; (3) to nonsuit certain existing claims for such payment in the case of Federal pledges of credit (bonds, etc.) bearing the gold clause; (4) to overthrow the doctrine that Congress had authority to repudiate the United States' pledge of its credit; (5) to leave open a possibility

of recovering on claims against Government bonds under other economic conditions or by some other sort of suit. On the first three points the Court stood 5 to 4; on the last two it stood 8 to 1.

Invalidation of Recovery Act. The Court's first ruling against features of this act was made on January 7, as to a Federal prosecution for interstate transportation in alleged contravention of the petroleum code; this code had been established under separate authorization provided in Section 9 of the act. The majority's opinion (Cardozo alone dissenting) was written by Chief Justice Hughes. It held Section 9, Subdivision C of the act an unconstitutional delegation of power. This part of the act sought to give the President authority to prohibit the transportation of petroleum out of a State, in excess of the amount permitted by the State's authority. The Chief Justice remarked that an executive order eliminating the prohibitory clause from the petroleum code had been executed Sept. 13, 1933, but that the order had not been made known when violation was prosecuted in the lower courts, wherefore the old order, though made known to the Supreme Court, was not allowed to avail to bar a decision.

United States vs. Schechter. The Court unanimously held on May 27 that the Recovery Act was unconstitutional and invalid, with regard to codes: (1) in that "the code-making authority thus conferred is an unconstitutional delegation of legislative power"; (2) that attempts to fix by code the wages and hours of employees in intrastate business were invalid, further, as exceeding the Federal power to regulate interstate commerce. As to the first point, Congress was held to have left to the President the defining of codes' objects to such a degree as to have empowered him to make positive laws. As to the second point, the Federal authority was held able to regulate intrastate commerce only so far as such commerce affected interstate commerce directly. The result of the decision, in the field of actual practice, was to render the act useless for Federal rule over industry.

Farm-Mortgage Moratorium Unconstitutional. In *Louisville Land Bank vs. Radford*, on appeal of a creditor against a farmer mortgagor who invoked the Frazier-Lemke Act to escape foreclosure, the Court held unanimously on May 27 that the act transgressed the Fifth Amendment's prohibition against taking private property for public use without just compensation. The opinion (by Brandeis) found the interest of 1 per cent a year as set by the act "obviously not the rate of money," and the bestowal on the bankrupt mortgagor of the right to keep tenure and buy his property back by deferred payments a deprivation of the creditor.

President's Power of Removal. The appeal of the executor of the estate of former Federal Trade Commissioner William E. Humphrey, as to Humphrey's dismissal by the President for non-consonance with the Administration's views, was decided against the Government, on May 27. The court held (opinion by Sutherland) that a Trade Commissioner could not be removed except on statutory grounds, and that his removal "at the mere will of the President . . . might thwart in large measure the very ends which Congress sought to realize by definitely fixing a term of office."

Railroad Retirement Act Invalid. The Court, by a decision of 5 to 4, overthrew on May 6 the act of 1934 for retiring old railroad employees on pensions. The majority were Justices Roberts (who wrote the opinion), Sutherland, McReynolds,

Butler, and Van Devanter; the minority included the more "liberal" wing of the Court. The case at issue was *Railroad Retirement Board vs. Alton Railroad et al.* The majority's opinion held that the law imposed burdens on the railroad companies for no true purpose warrantable as control of interstate commerce, but "purely for social ends," lying "obviously outside the orbit of Congressional power." The minority's opinion (by Hughes) took sharp issue.

Matters Affecting States. A decision reversing the Supreme Court of Ohio was rendered in January, against the Public Utilities Commission of Ohio, which was held to have ordered the West Ohio Gas Company to sell gas at an unduly low rate. On April 1 the conviction in Alabama of Clarence Norris, one of the nine Negro boys tried in the Scottsboro case (see ALABAMA) was set aside and a new trial was ordered. The Court held that Negroes had been unjustifiably omitted from jury duty in the State and that the convicted Negro had therefore not received "the equal protection which the Constitution guarantees." The case brought by R. R. Grovey, a Negro of Texas seeking the right to vote in the State Democratic primary elections, was decided on April 1 against Grovey; the Court held valid the State Democratic Convention's declaration of May, 1932, permitting only whites to be members of the party. On April 29 the Court ruled that the Federal Government could not prevent the State government of Arizona from halting Federal construction of the Parker Dam in the Colorado River. On May 20 the court refused on grounds of procedure to reverse the conviction, in Georgia (q.v.), of a Negro Communist, Angelo Herndon, under a State law against inciting violence.

Removal of the Court. The Supreme Court left its old seat, the former Senate Chamber in the Capitol, at the end of June. On resuming after the summer vacation, it occupied the new Supreme Court Building on October 7.

Other Federal Courts. A great number of suits relating to the "New Deal" occupied the District and Circuit Courts. Some of these concerned the constitutionality of acts on which the Supreme Court passed fairly early in the year. Many others had to do with the TVA and the AAA, as to which the Supreme Court undertook only in October to hear test cases. A circuit Court's decision at Birmingham (Judge Grubb) granted an injunction against the TVA's acquiring properties from the Alabama Power Company; this was reversed by a Circuit Court at New Orleans and appeal was taken to the Supreme Court. The Circuit Court at Providence (Judge Lett) ruled on March 13 against the AAA's efforts to regulate by code and licenses the production and sale of milk in Rhode Island. The Circuit Court at Cincinnati held in July that the Federal Government could not use the process of condemnation to obtain land on which to build low-cost dwellings, through the PWA, for poor people. This object was denied to be a public use. The Federal District Court at Baltimore (Judge Coleman) declared November 7, in a suit concerning the American States Public Service Company, that the Utility Holding Company Act was unconstitutional in its entirety. These decisions are but samples of the multitude of decisions of diverse tenor as to the constitutional merit of new forms of authority that had been created. As to the AAA's processing taxes, the Circuit Court at Boston held on July 16, in the Hoosac Mills case that these levies were unconstitutional.

This was followed by the passage by Congress of a prohibition against suits to recover such taxes; but there were granted a huge number of temporary injunctions against their collection. As to the NRA, when it was invalidated the Attorney-General dropped no less than 411 suits that he was entertaining for its enforcement. See LAW.

UNITED STATES MILITARY ACADEMY. A government institution at West Point, N. Y., for the theoretical and practical training of cadets for the military service of the United States, opened in 1802. On Sept. 1, 1935, the total number of cadets was 1591. There were 185 members of the faculty. The academy is a component part of the Regular Army of the United States and is maintained solely by appropriations from the War Department, which in 1935 amounted to \$2,297,058 for salaries and maintenance of public works. The library contained more than 102,000 volumes. Superintendent, Maj. Gen Wm D. Connor, U.S.A.

UNITED STATES NAVAL ACADEMY. A school for the education and training of midshipmen in Annapolis, Md., founded in 1845. The total number of midshipmen at the beginning of the academic year 1935-36 was 2022. The faculty numbered 275. The library contained 80,000 volumes. Midshipmen, after graduation, are commissioned ensigns in the U.S. Navy, except for a few who are commissioned second lieutenants in the U.S. Marine Corps. Superintendent, Rear Admiral David Foote Sellers, U.S.N.

UNITED STATES OF EUROPE. While the goal of European political union, proposed by Foreign Minister Aristide Briand of France in 1930, seemed further than ever from realization in 1935, there was a strengthening of the principle of collective security which, according to some observers, represented the foundation stone of a future United States of Europe. For the first time in history the European nations applied financial and economic sanctions against an aggressor (see ETHIOPIA and ITALY under *History*; LEAGUE OF NATIONS). The network of mutual assistance pacts was further extended and the activities of the Balkan and Baltic Ententes (q.v.) reflected continued progress toward regional political and economic unions, which might later provide the basis for a federation of European States.

UNIVERSALISTS. A religious denomination, existing chiefly in the United States, Canada, Japan, and Korea, which holds as part of its doctrine the universal fatherhood of God, the universal brotherhood of man, the certainty of punishment for sin and the final harmony of all souls with God. In 1935 there were 28 State Conventions and 2 State Conferences. The number of churches was 577; ministers in fellowship, including lay licenses, 505; church members, 52,405, and Church Schools, 350. The departmental work is carried on by different organizations including The Women's National Missionary Association, The Young People's Christian Union, and The General Sunday School Association. The denominational periodical, the *Christian Leader*, is published weekly. Rev. W. H. Macpherson, L.H.D., of Joliet, Ill., is president of the Universalist General Convention. Headquarters of the denomination: 16 Beacon St., Boston, Mass. See FREE CHURCH FELLOWSHIP.

UNIVERSITIES AND COLLEGES. Statistics. Attendance. Dr. Raymond Walters, reporting in *School and Society* on registration in American universities and colleges, states that the enrollment for 1935 was 6.6 per cent greater than

that for 1934, while that for 1934 was 5 per cent greater than that for 1933.

In the 577 approved institutions with which the report was concerned there were "700,730 full-time students and a grand total (including part-time and summer-school registration) of 1,063,472 resident students."

The 577 institutions considered are those that are approved by various regional associations as reported by the American Council of Education. They include 105 universities, 354 colleges of arts and sciences, and 118 technological institutions.

The enrollments in junior colleges was not included in the totals.

The report shows that the enrollment in 55 universities under public control was 8.3 per cent greater in 1935 than in 1934, while the 49 universities under private control had an increase of only 3.6 per cent.

There were pronounced differences in the increases between various sections of the country and even between different States in the same section. The 41 institutions in Arkansas, Louisiana, Oklahoma, and Texas, with an increase of 10.35 per cent, led the regions. The 39 institutions in the six new England States had an increase of only 2.25 per cent. The 17 institutions in Kansas had an increase of 21.03 per cent. The 12 institutions in South Carolina had an increase of 16.10 per cent, while the five institutions in West Virginia suffered a decrease of 3.73 per cent.

In February, 1934, the Federal Government allotted funds for the help of needy students in colleges and universities. At first this programme was conducted by the Federal Emergency Relief Administration. During the past year the programme was conducted by the National Youth Administration which has a director in each State. The provisions that were in operation for the college year beginning in September, 1935, include the following:

Students must be selected from among those who, without Federal help, would be unable to attend or to continue in college. . . . A student will be permitted to earn as much as \$20 a month, but each college will be allotted funds on the basis of \$15 a month for each 12 per cent of its enrollment of full-time, resident students . . .

Funds allotted shall be used to pay students for doing socially desirable work, including the sort customarily done in the institution by students who are working their way through college, such as clerical, library, and research work. The programme is intended also therein to provide unique educational and socially useful opportunities which would in many cases supplement a student's classroom activities.

The National Director reports that monthly allotments amounting to \$1,559,645 for undergraduates, and \$79,300 for graduates were given to 109,001 students in 1602 institutions.

This unusual condition makes it difficult to interpret the true significance of college and university enrollment. When the Federal aid was first given to students, it was stipulated that the purpose was to increase the number of young men and women going to college and that at least half of the funds must be paid to new students. The allotments were given to 12 per cent of the institution's enrollment. The registration in the approved colleges and universities of full-time students increased 12.8 per cent between 1933 and 1935. College and university authorities are concerned with what would happen if the Federal appropriations for needy students should end.

Dr. Walters has pointed out that the increase in part-time and summer-school students in these two years was approximately 23.9 per cent, yet

these students were not aided by the Federal Government.

Junior Colleges. On Dec. 1, 1935, there were 519 junior colleges with a total enrollment of 122,514. This is an increase of 13.6 per cent over the preceding year. More than 17 per cent of full-time students enrolled in college courses are now in junior colleges.

Only four States report no junior colleges. These are Delaware, Nevada, Rhode Island, and Wyoming. The six States having the largest number of junior colleges are California, 55; Texas, 43; Iowa, 37; Missouri, 22; Illinois, 21; and Mississippi, 21.

The institutions under public control number 214, with an enrollment of 82,701. Those under private control number 305, with an enrollment of 39,610. Public institutions are located in 33, and those under private control are in 42 States.

Only three of the publicly controlled institutions are for men only. All the others are coeducational. Among the privately controlled junior colleges 41 are for men, 101 for women, and 163 coeducational.

More than half of the privately controlled institutions are under denominational control. The Methodists lead with 41 institutions.

The most characteristic form of organization is the two year college. In such institutions the ordinary freshman and sophomore courses are given. The report shows that there were 68,249 freshmen and 38,791 sophomores.

Many of the institutions are closely connected with the high school. It is, therefore, possible to make use of the high school teachers. The reports indicate that there are 5037 full-time and 3312 part-time instructors.

Some private academies and secondary schools that would have been compelled to close their doors found it possible to continue as junior colleges with a large degree of success.

Graduate Study in the United States. The United States Office of Education published a bulletin entitled, *Graduate Study in Universities and Colleges in the United States*. The study shows that the remarkable increase in secondary and collegiate students is reflected in the number of students that are working for advanced degrees.

Prior to 1870, there were but few graduate students in the universities. For the year 1870-71 Yale University reported 24; Harvard, 8; and Princeton, 3. The following table shows the number of graduate students enrolled at different years since 1871-72.

Year	No of graduate students	Year	No of graduate students
1871-72 ..	198	1910 . . .	9,370
1880-81	460	1920	15,612
1890	2,382	1930 . . .	47,255
1900 .	5,831		

The accompanying table gives the number of advanced degrees awarded in certain years since 1890.

Year	No. of Ph.D. degrees			No. of masters' degrees*		
	Men	Women	Total	Men	Women	Total
1890 .....	...	...	44	...	...	70
1900	322	20	164	1,405	339	1,744
1910 . . .	365	44	342	1,821	619	2,440
1920 .	439	93	532	...	...	3,873
1926 .	1,115	187	1,302	...	...	7,005
1928	1,249	198	1,447	7,204	4,582	11,766
1930	1,692	332	2,024	8,766	5,729	14,495

* Masters' degrees awarded in 1932 totaled 19,339

In another report, the Office of Education states that during 1934-35, the universities and colleges conferred approximately 3000 doctor of philosophy degrees and 25,000 masters' degrees.

The increase of advanced students who have been expected to deal with research is a matter of concern to many institutions. Investigations show that a large proportion of those who obtain the doctorate never conduct research after their graduation. As a result, there is a tendency to shift students from strictly scientific research practices to more liberal and practical efforts. In some institutions the candidates for the master's degree no longer are required to submit a thesis in partial fulfillment for the degree. There is a like tendency in the requirement for the doctorate. Institutions that grant the doctor of philosophy degree still hold to the requirement of a dissertation but a number of universities are granting doctors' degrees other than doctor of philosophy. In such cases the candidates often do not submit dissertations which are the result of scientific research.

The problem that confronts the institutions with large numbers of graduate students is that of providing effective instruction for research workers. Some institutions have eliminated the master's thesis primarily because the numbers of students are such as to make it impossible to direct their efforts properly.

Academic Freedom. The freedom of college and university teachers to deal unhampered with social and economic questions has become a matter of great importance to all institutions. It is generally true that the teachers in all educational institutions have been required to take the oath of allegiance wherever such laws have been enacted. The laws do not specifically mention private institutions, but such institutions do receive exemptions from taxation and in this way they too become subject to the requirements of the law.

It is certain that the laws requiring "loyalty oaths" have been more directly aimed at the institutions of higher learning than at the public school teachers. There is a widespread impression that there are college professors who are not content to discuss disputed social and economic doctrines but that they definitely attempt to indoctrinate students with their own views. It makes little difference what these views may be, there is always some group or interest that pronounces them "un-orthodox."

A surprising number of institutions have been under the fire of criticism during the year. Trouble has not been confined to any one section of the country nor to any one type of institution. Matters that earlier would have aroused little or no interest except in the institution concerned now are featured in newspapers throughout the country. One of the most important institutions was the victim of such publicity merely because the parent of one student charged that his daughter was instructed in radical views. An investigation by the State legislature was threatened, yet a careful investigation by competent people revealed that there was no foundation to the charge.

The efforts to limit the teaching within colleges and universities are increasing. The questions which are raised have become a real challenge to educators.

One of the clearest statements of the purpose and obligations of academic freedom as the universities view these matters is found in the report of President Nicholas Murray Butler for 1935. He writes:

It [academic freedom] relates solely to freedom of thought and inquiry and to freedom of teaching on the part of accomplished scholars as these were first established some two hundred years ago at Halle and at Göttingen. Its object is to make sure that scholarship and scientific inquiry may advance without being hampered by particular and specific religious or political tenets. Academic freedom has never meant, and could not possibly mean in any land, the privilege, much less the right, to use the prestige, the authority and the influence of a university relationship to undermine or to tear down the foundations of principle and of practice upon which alone that university itself can rest. Were a university to permit conduct of this kind on the part of its members, the result would only be to add a slow undermining of the university's influence and repute to open attacks upon them.

Before and above academic freedom of any kind or sort comes university freedom, which is the right and obligation of the university itself to pursue its high ideals unhampered and unembarrassed by acts or conduct on the part of any of its members which tend to damage its reputation, to lessen its influence or to lower its authority as a centre of sound learning and moral teaching. Those whose convictions are of such a character as to bring them in open conflict with the university's freedom to go its way toward its lofty aim, should in ordinary decency and self-respect withdraw of their own accord from university membership in order that their conduct may be freed from the limitations which university membership naturally and necessarily puts upon it.

Education in the Civilian Conservation Corps. The most outstanding achievement of adult education is to be found in the educational programme developed in the Civilian Conservation Corps. This work, begun in February, 1934, has reached proportions that are astonishing. The latest available reports show that for the month of September, 1935, there were 31,012 courses offered. Of these 5399 were elementary courses, 7840 were high school courses, 2324 were college courses, 11,430 were vocational courses, and 4019 were general courses. Approximately 230,889 persons were enrolled in these courses. The instructors number 20,308.

The U.S. Office of Education has reported that more than 57,000 men are enrolled in forestry courses, about 13,000 are studying soil erosion, 4800 are enrolled in photography, and 2853 are studying radio.

The camps are supplied with "outlines of instruction" in some fifteen specific occupations. A total of 5118 educational films were shown to 290,541 men. About 328,069 books were circulated among 207,475 men. More than 109,000 men were engaged in about 5000 different hobby activities.

The dominant aims or purposes of the camp educational activities are stated in "A Handbook for Educational Advisers in the Civilian Conservation Corps Camps" as follows:

Building wherever possible upon the activities already under way, the aims of the strengthened and broadened educational programme are:

1. To develop in each man his powers of self-expression, self-entertainment, and self-culture.
2. To develop pride and satisfaction in cooperative endeavor.
3. To develop as far as practicable an understanding of the prevailing social and economic conditions, to the end that each man may cooperate intelligently in improving these conditions.
4. To preserve and strengthen good habits of health and of mental development.
5. By such vocational training as is feasible, but particularly by vocational counseling and adjustment, to assist each man better to meet his employment problems when he leaves camp.
6. To develop an appreciation of nature and of country life.

Educational Foundations. The annual report for 1934 of the 20th Century Fund gives the disbursements of 123 American foundations privately subsidized for the public good. The report shows that these foundations cut their contributions in half between 1930 and 1934.

During 1934 the field of education received the

largest gifts amounting to a total of \$8,972,646. This was 26.9 per cent of the total given.

The fields of interest that received \$500,000 or more from these foundations were the following:

Education	\$8,972,646
Medicine and public health	8,609,710
Social welfare	3,896,487
Social sciences	3,084,343
Physical and biological sciences	1,746,662
International relations	1,048,016
Economics	1,021,532
Humanities	728,178
Government and public administration	699,832
Æsthetics	681,240
Child welfare	502,091

The foundation having assets of \$10,000,000 or more were:

Carnegie Corporation of N. Y.	\$157,553,073
Rockefeller Foundation	153,609,942
General Education Board	45,822,414
Commonwealth Fund	42,903,684
W. K. Kellogg Foundation	41,592,087
Carnegie Institution of Washington	34,611,416
Carnegie Foundation for the Advancement of Teaching	30,821,545
Russell Sage Foundation	15,457,575
Buhl Foundation	13,120,850
Carnegie Endowment for International Peace	11,127,415
Milbank Memorial Fund	10,449,862
Children's Fund of Michigan	10,177,137
Maurice and Laura Falk Foundation	10,000,000

Changes in Organization. For a long period the college curriculum grew in the direction of pronounced specialization. Departments developed with little regard for each other. The increase in knowledge was so great that every field could be extended and yet keep within legitimate boundaries. Recently, the effectiveness of such departmentalization has been under question. Colleges and universities began to offer orientation courses which ignored the boundaries of the various fields while making use of all of them. The development of social science as a subject tended further to ignore departments. The catalogues of higher institutions now show a decided tendency to name several instructors with a single course. Such instructors do not always belong to the same department.

This movement tends to bring the learner to the centre of attention. There is no attempt to weaken the department; on the contrary it is strengthened, but it works more in accord with other departments than was possible under former conditions. The professor is still a member of a departmental group and is still concerned with the extension of knowledge within his own field.

Harvard University proposes a series of "university professorships" that will not belong to any department nor to any particular faculty of the university. President Conant has termed them professors "without portfolio" or "with roving commissions."

The Youth Commission. The American Council on Education has announced the organization of a commission to study the problems connected with the care and education of American youth. The study was made possible by a grant of \$500,000 by the General Education Board. This is to be used over a period of five years. There is also a supplemental grant of \$300,000 to be used for such purposes as the commission may determine.

The commission is composed of fourteen outstanding civic and educational leaders. They are Will W. Alexander, Atlanta, Georgia; Newton D. Baker, Cleveland, Ohio; Ralph Budd, Chicago,

Illinois; Lotus D. Coffman, Minneapolis, Minnesota; Dorothy Canfield Fisher, Arlington, Vermont; Willard E. Givens, Washington, D. C.; Henry I. Harriman, Boston, Massachusetts; Robert M. Hutchins, Chicago, Illinois; Chester H. Rowell, San Francisco, California; William F. Russell, New York City; Edith B. Stern, New Orleans, Louisiana; John W. Studebaker, Washington, D. C.; Marion Van Waters, Framingham, Massachusetts; and Matthew Woll, New York City.

At the opening meeting of the commission the president of the Council outlined the possible work of the commission as follows:

(1) A comprehensive analysis of the characteristics of youth, and an evaluation of the influences to which they are subject.

(2) The continuous study of commonly accepted goals in the care and education of American youth, for the purpose of determining the adequacy of these goals in relation to present social, economic, and political trends.

(3) The investigation of agencies concerned with the youth problem, and the eventual recommendation of procedures which seems to influence young people most effectively.

(4) The systematic popularization and promotion of desirable plans of action through conferences, publications and demonstrations of promising procedures.

The commission selected Dr. Homer P. Rainey, President of Bucknell University, as director of the staff. He will associate with himself a staff of capable people who will compose a somewhat permanent organization. It is proposed that the commission make use of and cooperate with existing agencies that care for the education of youth.

See EDUCATION IN THE UNITED STATES.

UPPER VOLTA. See FRENCH WEST AFRICA.

URAL AREA. See SIBERIA.

URINARY TRACT, TREATMENT OF INFECTIONS BY KETOGENIC DIET. See MEDICINE AND SURGERY.

URUGUAY, úrōō-gwā or ōō'rōō-qwí'. A South American republic. Capital, Montevideo.

Area and Population. With an area of 72,153 square miles, Uruguay had an estimated population of 1,993,234 on Jan. 1, 1934, compared with 1,042,686 at the 1908 census. Montevideo, with 671,812 inhabitants in 1935, had one-third of the total population. Estimated populations of other cities (1930) were: Paysandú, 37,000; Salto, 35,000; Mercedes, 30,000; Minas, 28,000. The population is almost entirely of European blood, with Spanish, Italian, and Portuguese strains predominating. Living births in 1933 numbered 41,650; deaths, 20,358; marriages, 9520; immigration, 138,639; emigration, 136,952.

Education. Elementary education is compulsory and both primary and secondary education is free. Public and private elementary schools in 1933 numbered 1548, with 186,435 pupils; the secondary school enrollment was 11,856; and the University of the Republic at Montevideo had 13,766 students (1932).

Production. Stock raising is the chief industry, only about 7 per cent of the productive area being devoted to crops. In 1933 animal products accounted for 85 per cent of the value of all exports. Live-stock in 1935 included 18,000,000 sheep, 7,000,000 cattle, and 100,000 swine. During 1934, 1,110,000 cattle, 1,075,329 sheep, and 61,336 swine were slaughtered. Wool production in 1934-35 was 59,000 metric tons. Production of the chief crops in 1934-35 was (in metric tons): Wheat, 307,000; barley, 5700; oats, 53,400; linseed, 120,600. The 1933-34 corn crop was 123,257 metric tons; the wine yield, 583,000 hectoliters. Potatoes, beans,

olives, and tobacco are other crops. Meat packing is the principal industry.

Foreign Trade. Provisional 1934 returns showed imports of 62,712,339 pesos (appraised values, estimated to be from 10 to 25 per cent under market values), compared with 60,652,636 pesos in 1933. Exports were 69,800,566 pesos (66,637,590 in 1933). Import values from the principal sources of supply (in 1000 pesos) were: Great Britain, 11,255; United States, 9352; Argentina, 5744; Germany, 5410; Brazil, 4674. Exports (in 1000 pesos) went mainly to: Great Britain, 17,766; Germany, 11,882; United States, 7273; Italy, 5297; Belgium, 5110; Brazil, 5081. The chief exports in 1934 were (in 1000 pesos): Wool, 17,580; canned meat, 9563; hides and skins, 8453; flaxseed, 4782; wheat, 4503; chilled beef, 4303; frozen beef, 3806. Petroleum products, coal, silk fabrics, and yerba mate are the principal imports.

Imports in 1935 totaled 59,959,272 pesos; exports, 95,356,862 pesos. United States statistics for 1935 showed imports from Uruguay of \$6,887,268 (\$4,711,203 in 1934) and exports to Uruguay of \$6,222,007 (\$6,140,456).

Finance. Budget estimates for the calendar year 1935 placed receipts at 84,162,974 pesos (59,044,045 in 1934) and expenditures at 83,898,420 pesos (58,181,533 in 1934). The Treasury reported an actual deficit of 3,445,462 pesos in 1933 and a deficit of 839,000 pesos in 1934. The public debt as of Dec. 31, 1934, totaled 313,604,623 pesos (\$246,806,838), of which 141,669,765 pesos represented the external debt, 167,069,358 pesos the internal, and 4,865,500 pesos the international debt. Uruguay defaulted on amortization payments on the external debt on Jan. 20, 1932. Interest payments were continued at the rate of 3½ per cent during 1934 and 1935.

The Uruguayan peso (par value, \$1.7511) exchanged at an average of \$0.7869 in the official market during 1934, while its value in the free market ranged from \$0.40 to \$0.50.

Communications. Uruguay in 1934 had 1729 miles of railway lines open for traffic, including 205 miles of state-owned lines; 8663 miles of highways, including about 800 miles of paved roads; extensive navigable waterways; and connections at Montevideo with the inter-American air network. A total of 7437 vessels of 10,397,419 net register tons entered the ports in the overseas trade during 1933.

Government. Under the new Constitution adopted at the general election of Apr. 19, 1934, the former system dividing executive power between the President and National Administrative Council was abolished. Executive powers were concentrated in the hands of a President elected for four years by the legislature. His cabinet or Council of Ministers consisted of nine members representing the two political parties which polled the largest number of votes at the presidential election. The legislative powers were vested in a parliament consisting of a Senate of 30 members elected at large for four years and a Chamber of Deputies of 99 members elected by districts for four years. If the two parties polling the highest number of votes in the presidential elections obtain an absolute majority, the Senate seats are divided equally between them. If not, the seats are distributed by proportional representation. President in 1935, Dr. Gabriel Terra, who was reelected Apr. 19, 1934.

History. The long-expected revolt against President Terra's mild dictatorship broke out towards the end of January, 1935, the ringleaders

being Gen. B. Munoz and A. G. Morales. After a week's fighting, marked by numerous desertions of government troops to the rebels, the government crushed the insurrection and many of the rebel leaders fled across the border to Brazil. On February 9 the government relaxed the censorship and other emergency measures imposed upon the outbreak of the revolt. Unrest and political agitation continued, however. On March 19 the President reorganized his cabinet. On June 2 he was slightly wounded in the leg by a would-be assassin, who fired upon him during the ceremonies marking the state visit to Montevideo of President Vargas of Brazil. Early in August, however, the President announced that exiled political opponents of his régime would be permitted to return. On November 17 he revoked the emergency measures for the defense of the state in effect since the January revolt.

Charging that the Soviet Legation in Montevideo had been financing and directing Communistic agitation in other South American countries, and particularly in Brazil (q.v.), where a radical revolt had occurred in November, the Uruguayan Government on Dec. 27, 1935, severed diplomatic relations with the Soviet Union by sending their passports to the Soviet Minister and other members of the Legation staff. Uruguay was the only South American country which had recognized the Soviet Government and which maintained direct trade relations with the Soviet Union.

Although moderate gains were recorded, Uruguay's economic recovery continued to lag behind that of her two great neighbors—Argentina and Brazil. Accordingly the government on Aug. 14, 1935, supplemented the trade balancing law of Nov. 9, 1934, and the economy budget approved in January, 1935, with a third reconstruction measure—the gold revaluation law. This measure provided for revaluation of gold and silver stocks on the basis of the average value of the peso in official exchange for the preceding two months, or about \$0.45 in U. S. currency. Of the 55,265,440-peso profit accruing to the Treasury, the government allotted 15,600,000 pesos for public works, 11,984,416 for the cancellation of outstanding bank loans, 8,000,000 for mortgage relief, 6,070,000 for social welfare, 2,750,000 for education, and 4,360,923 for miscellaneous projects. An additional 6,500,000 pesos was invested in the exchange stabilization fund.

The bill also established an autonomous issue department within the Bank of the Republic and limited the maximum note issue to 101,000,000 pesos. It also provided for redemption of a number of internal loans and for the replacement of four external issues, to the extent that they were held in Uruguay, by an internal issue of 20,000,000 pesos, bearing 6 per cent interest and 1 per cent amortization.

The policy of balancing imports and exports with individual countries through government control of foreign exchange transactions was continued. Early in 1935 a Foreign Commerce Advisory Board was created to advise the President and the Bank of the Republic on the negotiation of trade agreements with foreign governments, the fixing of import quotas, and the allocation of exchange.

See BOLIVIA under *History*. Consult Simon G. Hanson, "The Uruguayan Plan for Economic Reconstruction," *Commercial Pan America* (Pan American Union, Washington, D. C.), October, 1935, No. 41.

UTAH. Population. On Apr. 1, 1930 (Fifteenth Census), 507,847; July 1, 1934 (latest Federal estimate), 520,000; 1920 (Census), 449,396. Salt Lake City, the capital, had (1930) 140,267 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

<i>Crop</i>	<i>Year</i>	<i>Acreage</i>	<i>Prod. Bu.</i>	<i>Value</i>
Hay (tame)	1935	556,000	1,078,000*	\$7,438,000
	1934	501,000	541,000*	6,762,000
Sugar beets	1935	42,000	511,000*	.....
	1934	32,000	250,000*	1,100,000
Wheat	1935	248,000	5,512,000	4,364,000
	1934	220,000	3,147,000	2,627,000
Potatoes	1935	13,600	2,040,000	1,224,000
	1934	13,000	1,040,000	551,000

* Tons.

Mineral Production. Gold, silver, copper, lead, and zinc to the value of \$22,975,534 were mined in the State in 1934. To this total, 136,582 fine oz. of gold contributed \$4,773,524; 7,111,417 oz. of silver, \$4,597,280; 86,024,925 lb. of copper, \$6,881,994; 116,153,945 lb. of lead, \$4,297,696; and 56,396,279 lb. of zinc, \$2,425,040. The production of coal in the State increased to a total of some 2,985,000 tons for 1935, from that of 2,406,183 for 1934 (revised). While the commercial production of natural gas remained small, being some 37,441 M cu. ft. for 1934, an apparently important field of natural gas was discovered in Emery County. Its flow was shut off to await consideration of a proposal to construct a pipe line to Marysville, Utah, to deliver the gas as fuel for the smelting of ores of aluminum.

Education. The number of inhabitants of school age, as reckoned for Oct. 31, 1934, was 148,293. The enrollments of pupils in the public schools in the academic year 1934-35 numbered 142,027. Of these, 84,571 were in common schools or elementary grades, and 57,456 were in high schools. The year's expenditures for public-school education throughout the State totaled \$10,190,313, substantially exceeding the total of the year previous. The average of the teachers' yearly salaries likewise rose, by some 6 per cent, to \$1139.61.

In common with the school authorities of many other States, the Superintendent of Public Instruction engaged during 1935 in the task of altering the curriculum of the public schools. Unemployment among teachers holding qualifying certificates was reported as negligible.

Legislation. The Legislature enacted a measure to permit the establishment of a State system of unemployment insurance; the intention was that the system should be put in effect after the passage of the Federal Social Security Act, which provided a Federal subvention to State systems of this sort. Passed in advance of the Federal act, that of Utah provided that a distinct account be kept with regard to payments to employees of each firm, and that the payments made by the employers be amassed in part in a central fund. The total contributions required of employers were normally to be in the proportion of 3 per cent to their respective payrolls.

A State monopoly of the retailing of liquor was created; shops operated by the State were to handle a wide variety of liquors and wines, selling by the package. The Legislature gave the State's ratification to the proposed amendment of the Federal Constitution to authorize Congress to regulate the labor of the young.

Political and Other Events. A State Planning Board made a study of the condition of in-

habitants of holdings considered to be below the standard for tenure and development as farming land; it recommended the removal of some 12,000 families to other land.

Alteration in the character of Great Salt Lake was reported by Professor T. C. Adams of the University of Utah, in September. He stated that the lake had recently precipitated salt, forming a coat on the bottom. The increasing salinity of the water of the lake, incident to its shrinkage, was attributed to some years of less than the previously normal rainfall and to the diversion of some of the water flowing into it, for the use of cities and of farmers.

Officers. The chief officers of the State, serving in 1935, were: Governor, Henry H. Blood; Secretary of State, Milton H. Welling; Auditor, Julius C. Anderson; Treasurer, Joseph Ririe; Attorney-General, Joseph Chez; Superintendent of Public Instruction, Charles A. Skidmore.

Judiciary. Supreme Court: Chief Justice, Elias Hansen; Associate Justices, William H. Folland, Ephraim Hansen, David W. Moffat, James H. Wolfe.

UZBEK S.S.R. See SOVIET CENTRAL ASIA.

VANDERBILT UNIVERSITY. A nonsectarian institution of higher learning for men and women in Nashville, Tenn., founded in 1873. The enrollment for the autumn term of 1935 was 1542. The faculty numbered 370. The annual income was \$1,541,000. Volumes in the library numbered 143,000. Chancellor, James Hampton Kirkland, Ph.D.

VAN GOGH. See ART EXHIBITIONS.

VASSAR COLLEGE. A nonsectarian institution for the higher education of women in Poughkeepsie, N. Y., founded in 1861. The enrollment for the autumn of 1935 was 1224. The faculty numbered 172. The endowment amounted to \$8,600,000, the income from funds was approximately \$400,000. The library contained 196,200 volumes. President, Henry Noble MacCracken, Ph.D.

VATICAN CITY. A sovereign state, officially known as the State of Vatican City, established within the city of Rome as the seat of the Papacy on June 10, 1929, in accordance with the Italo-Vatican (Lateran) treaty of Feb. 11, 1929. Ruler in 1935, Pope Pius XI.

The area of Vatican City is 108.7 acres, including St. Peter's Square, and in addition 13 ecclesiastical buildings outside of its limits enjoy extra-territorial rights. It has its own coinage, import duties, railway station, and its postal, telegraph, and radio facilities. The census of Dec. 31, 1932, showed 1025 inhabitants, including 853 Italians and 121 Swiss, the latter mostly members of the papal gendarmery. Under the Constitution of June 7, 1929, the Pope exercises full legal, judicial, and executive powers. Executive authority was delegated by the Pope to a governor. Governor in 1935, Marquis Camillo Serafini. During the year Marquis Serafini carried through a complete reorganization of the civil government. A new broadcasting system and an enlarged observatory were inaugurated during 1935. See ROMAN CATHOLIC CHURCH.

VEGETABLES. See HORTICULTURE.

VENEZUELA. *vën'è-zwě'lä; Amer. Sp. pron., vā'nä-swä'lä.* A republic of South America, consisting of a Federal District, 20 States, and two Territories. Capital, Carácas.

Area and Population. Venezuela has an area estimated at 352,051 square miles and a population estimated on Dec. 31, 1934, at 3,324,160 (3,026,878 at the 1926 census). Carácas had about 143,147 inhabitants in 1934. Populations of the other cities

(1926) were: Maracaibo, 74,767; Valencia, 36,804; Nirgua, 36,836; Duaca, 28,719; Carúpano, 25,679; Río Caribe, 25,428; Barquisimeto, 23,109. Roman Catholicism is the prevailing religion.

Education. Primary education is nominally free and compulsory but about 57 per cent of the population is illiterate. In 1934 elementary education was provided in 1633 national, state, and municipal schools, each having one teacher; in 231 larger graded schools; in 127 one-teacher private schools, and 92 graded private institutes. The primary school enrollment (1933) was 121,035. For secondary education there were 47 schools, with 2040 pupils, and for higher education four colleges at Carácas (2), Maracaibo, and Mérida.

Production. Agriculture, stock raising, petroleum mining, manufacturing, pearl fishing, and exploitation of the forests are the principal industries. Production of the chief crops was: Coffee, 57,000 metric tons in 1933-34; cacao, 11,600 metric tons (exported) in 1933-34; cane sugar, 20,300 metric tons in 1933-34. Tobacco, cotton, corn, beans, and wheat are grown largely for domestic consumption. Forest products include balatá, tonka beans, divi-divi, and hardwoods. Production of the leading minerals in 1934 was: Petroleum, 20,112,115 metric tons (17,293,193 in 1933); gold, 3392 kilograms (2977 in 1933). Copper, magnesite, asphalt, and salt are other mineral products.

Foreign Trade. Imports in 1934 were valued at 159,685,860 bolívares (143,587,574 in 1933) and exports at 671,942,839 bolívares (617,546,684 in 1933). Petroleum and its products accounted for 608,431,509 bolívares of the total exports in 1934 (533,208,675 in 1933). In 1934 coffee exports were valued at 32,710,000 bolívares; cacao, 6,331,000; gold, 12,494,000. The principal imports are textiles, machinery, automobiles, drugs, and medicines, etc. The value of imports from the chief sources of supply in 1934 (in 1000 bolívares) was: United States and colonies, 72,155; Great Britain and colonies, 44,241; Germany, 11,287; the Netherlands and colonies, 7613; France and colonies, 6136. The distribution of 1934 exports was (in 1000 bolívares): the Netherlands and colonies (mostly petroleum), 500,789; United States and colonies, 107,736; Great Britain and colonies, 21,700; France and colonies, 11,514.

United States statistics for 1935 showed imports from Venezuela of \$21,428,443 (\$22,120,365 in 1934) and exports to Venezuela of \$18,584,054 (\$19,281,247 in 1934).

Finance. For the fiscal year ended June 30, 1934, government revenues totaled 171,829,000 bolívares and expenditures were 153,925,000 bolívares. For 1934-35 budget estimates were: Receipts, 148,650,000 bolívares; expenditures, 141,666,820 bolívares. For 1935-36 the estimates balanced at 164,594,000 bolívares, of which about 13,000,000 bolívares was to be used to retire all the outstanding internal debt and 10,000,000 bolívares to assist coffee and cacao growers. The treasury reserves on Apr. 15, 1935, amounted to 107,445,263 bolívares, an increase of 23,826,163 bolívares over the same date in 1934. With the retirement of its internal debt in 1935-36, Venezuela enjoyed the unique distinction of having no public indebtedness. The par value of the bolívar was \$0.19295.

Communications. Railway lines in 1934 extended about 750 miles; motor highways, about 3100 miles, open the year round; navigable waterways, 12,000 miles. Air lines connect the principal cities with the inter-American air network. The net tonnage of vessels entering Venezuelan ports

with cargo in the overseas trade during 1933 was 3,843,000. Due mainly to heavy oil shipments, the tonnage cleared was 11,068,000. The improvement of port works and extension of national motor highways proceeded actively during 1935.

Government. The Constitution of May 29, 1929, as amended in 1931, vested extensive executive powers in a President elected by Congress for seven years. Congress consists of a Senate of 40 members and a Chamber of Deputies of 85 members, all elected for three years. President in 1935, Gen. Juan Vicente Gómez, who as chief executive or commander-in-chief of the army had exercised undisputed control of Venezuela since 1908.

History. The death on Dec. 17, 1935, of Gen. Juan Vicente Gómez (q.v.), dictator of Venezuela for 27 years, launched the country upon a new era, fraught with imminent danger of a revival of the revolutionary plague which had kept the nation in almost perpetual turmoil before Gómez seized power in 1908. It had long been predicted that the passing of the iron-handed President would prove the signal for a struggle for power among his lieutenants and unleash the long-accumulated hatred of the populace against the henchmen through whom Gómez conducted his tyrannical régime. Immediately after the dictator's death, his cabinet designated Gen. Eleazar López Contreras, Minister of War, as Provisional President. The latter took immediate military precautions, at the same time freeing political prisoners and pledging that his government would liquidate the dictatorship and restore civil liberties and popular government. His prompt action was credited with preventing the subsequent riots and disorders from degenerating into a general civil war.

Popular resentment against various members of the Gómez clique who had achieved notoriety for their cruelty and exploitation boiled over on December 21, two days after the state funeral of General Gómez was held in Maracay. Severe rioting gripped Carácas, Valencia, Mérida, Cumana and various other towns. Gen. Eustaquio Gómez, cousin of the dictator, was shot to death, as were a number of other followers. Many others fled to Colombia and Trinidad. Properties of hated members of the Gómez régime were wrecked by mobs, including the offices of the newspaper *Nuevo Diario* and several theatres in Carácas. Rioting and looting was particularly widespread in Maracaibo, centre of the oil district, where enraged petroleum workers forced Gov. Vincencio Perez Soto of the State of Zulia to resign and menaced local merchants and foreign oil companies.

Gen. López Contreras checked the disorders by declaring martial law, establishing a strict censorship, and making numerous arrests. At the same time he took further steps to conciliate both public opinion and his more powerful rivals for the Presidency. On December 22 he decreed the appropriation of 30,000,000 bolívares for further subsidization of the distressed coffee industry. He also announced a large public-works programme under which laborers in the Carácas district were promised a wage of five bolívares a day. Numerous exiles who had fled abroad during the Gómez régime were invited to return.

On December 27 Gen. López Contreras announced that the government was in complete control of the situation. Congress met on December 31 and formally elected him to fill out the term of President Gómez, which was due to expire in April, 1936. Popular antagonism toward Congress, which had functioned as the servile tool of Gómez,

was manifested during the session of December 31. A shouting mob invaded the galleries, proclaiming that Congress was illegally elected, was sitting unconstitutionally, and that the members were all friends of the dead dictator. This and other manifestations of unrest as the year closed indicated that the López Contreras Government, handicapped by its close affiliations with the discredited Gómez régime, would have difficulty in perpetuating its control.

Developments of an economic and financial nature in 1935 were mainly favorable. Financially, the country was in excellent condition, with provision made for the retirement of the remaining public debt and the treasury reporting a substantial surplus and reserve. As in 1934, Venezuela's chief economic and financial problem was to check the appreciation of the bolivar relative to other currencies, a development which made it difficult for Venezuelan coffee and cacao producers to compete with similar products of depreciated-currency countries in foreign markets. To check this trend the government resorted to several mildly inflationary measures, such as placing in circulation 20,000,000 bolívares in silver newly minted at Philadelphia and increasing the note issue. Another subsidy of 10,000,000 bolívares was distributed among coffee and cacao growers to enable them to continue operations. A similar bounty was disbursed in 1934. Several new national industries, including a meat-packing plant and a dairy, were established with government aid. The extensive programme of public works was continued.

VERMONT. Population. On Apr. 1, 1930 (Fifteenth Census), 359,611; July 1, 1934 (latest Federal estimate), 361,000; 1920 (Census), 352,428. Burlington had (1930) 24,789 inhabitants; Montpelier, the capital, 7837.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934.

Crop	Year	Acreage	Prod Bu	Value
Hay (tame) . . .	1935	919,000	1,119,000*	\$11,526,000
	1934	913,000	948,000*	17,254,000
Corn	1935	72,000	2,880,000	2,304,000
	1934	67,000	2,814,000	2,786,000
Potatoes	1935	16,000	1,840,000	1,472,000
	1934	16,000	2,720,000	1,251,000
Apples	1935	.. .	708,000	814,000
	1934	.. .	255,000	400,000

* Tons

Education. The number of inhabitants aged between 6 and 18 years was stated, for the academic year 1934-35, as 77,774. The enrollments of pupils in the public schools totaled 65,533. Of these, 52,793 were in elementary schools and 12,740 in high schools. The expenditure of the year, for public-school education in the State, totaled \$4,409,251. The year's salaries of teachers averaged, for those in high schools, \$1233.03; in graded positions, \$925.86; in rural schools, \$635.80; in elementary positions, \$754.69.

In accordance with the suggestion of an educational commission the division of the State into districts for supervision of public schools was altered in such manner as to do away with the need for superintendents working on partial time. The yearly period of operation of elementary schools was lengthened to 35 weeks, from 34. The minimum salary for teachers was increased. The sum contributed yearly by the State for the support of public schools was augmented by about 50 per cent, and the system for distributing State aid was changed, so as to make the grants accord with

standards of need and ability. A fourth year was added to the course provided in the State Normal School at Castleton.

Legislation. A measure for the creation of a system of pensions for the aged was enacted. It was designed to conform with the Federal requirements and qualify the State to receive the subventions to such pensions, provided in the Federal Social Security Act.

Political and Other Events. The State ceased to receive from the Federal Government the grants made through the FERA toward the support of the needy unemployed. Its own system for aiding this class by payments of public money had come to an end by the expiration of its statutory term in December, 1934. In that year the cost of such aid in the State totaled \$2,010,019, of which the FERA had paid \$1,221,191, and subdivisions of the State \$765,728. The total payment fell below the yearly rate of \$6 per capita of the population, which was less than half the rate for the country as a whole.

The State Supreme Court held the State's tax on chain stores, at rates graduated according to the number of stores owned by the same firm, to be unconstitutional. The tax had been enacted in 1933, and was estimated to supply some \$200,000 a year to the State treasury.

Officers. The chief officers of the State, serving in 1935, were: Governor, Charles M. Smith, Lieutenant-Governor, George D. Aiken; Treasurer, Thomas H. Cave; Secretary of State, Rawson C. Myrick; Auditor, Benjamin Gates; Attorney-General, Lawrence C. Jones; Commissioner of Education, Francis Bailey.

Judiciary. Supreme Court: Chief Justice, George M. Powers; Associate Justices, Leighton P. Slack, Sherman R. Moulton, Frank D. Thompson, John C. Sherburne.

VERMONT, UNIVERSITY OF, AND STATE AGRICULTURAL COLLEGE. An institution of higher education in Burlington, Vt. The University of Vermont, founded in 1791, and the Vermont Agricultural College, founded in 1864, were combined in 1865 as the University of Vermont and State Agricultural College. The 1935 autumn enrollment was 1245; the summer school enrollment, 986. The faculty numbered 186. The endowment amounted to \$3,053,151, while the income for the year was \$1,189,093. The library contained 140,000 volumes. The Mabel Louise Southwick Memorial building was opened during the year. President, Guy W. Bailey, LL.D.

VETERANS. See UNITED STATES under *Administration*.

VETERINARY MEDICINE. In the field of comparative medicine the year 1935 was marked by the unprecedented advance made in the eradication of bovine tuberculosis and the commencement of nation-wide control work with infectious abortion and with mastitis of cattle. The year saw the entrance of none of the dreaded diseases of livestock prevalent in various parts of the world not heretofore present in the United States.

Bang's Disease Eradication. The eradication work with bovine infectious abortion commenced in July, 1934 (See YEAR BOOK, 1934, p. 730) was extended to the 48 States. Of 5,125,700 cattle in 339,500 herds tested by the first of November about 531,000 in 35 per cent of the herds gave positive reactions to the blood test and were removed for slaughter. In five States led by Oregon with 40.96 per cent the dairy and beef cattle under supervision now exceeds 20 per cent and in 19

States the proportion is 5 per cent or less. Re-tests of the reacting herds indicated that good progress is being made by the method employed in the elimination of this disease, which has been estimated to take an annual toll from the livestock industry of the United States of \$50,000,000. The progress of the work was reported upon in August by Dr. A. E. Wight, director in charge (*Journ. Amer. Vet. Med. Ass'n*, 87, p. 290). A whole-blood stained-antigen test for the presence of the infection, similar to that developed for the detection of pullorum disease in the fowl, was used experimentally in field work with encouraging results.

Encephalomyelitis, Equine. Research work was continued with this brain disease of the horse and mule (see YEAR BOOK 1934, p. 730), the filtrable virus of which was demonstrated as present in cases in 7 States additional to the 8 States from which it had previously been recorded. There are 15 other States from which the disease has been diagnosed clinically. Aside from a moderate outbreak in Virginia the four States in the East originally infected had relatively little or no infection in 1935. A new centre of infection of small proportions was found in North Carolina. The Western virus was responsible for a great extension of the disease in other sections of the country, particularly severe outbreaks having occurred in Minnesota, North and South Dakota, and Idaho. There was estimated to have been at least 25,000 cases of the disease during the year's outbreak. Nine States used formol-killed brain tissue vaccine as an intended prophylactic in the field. The work indicated that the differences between the Eastern and Western types of the virus may be only different degrees of virulence rather than immunological dissimilarity. In transmission work with the Western virus it was discovered that a period of four to five days must elapse after the feeding of the mosquito, either on an infected guinea pig or on brain containing the virus, before the disease is transmitted by biting, after which time transmission regularly results for a period of about two months. The yellow fever mosquito failed to transmit the Eastern type of the virus.

Fluorine Toxicosis of Dairy Cows. Investigations in Wisconsin extending over a number of years have shown that very small amounts of fluorine are exceedingly toxic to the animal organism when fed over long periods of time and that the use of materials containing appreciable quantities of fluorine cannot be used without disastrous results. The importance of this finding is emphasized by the knowledge that crude rock phosphate contains 3.5 to 4 per cent of fluorine and that superphosphate may contain 0.5 to 2 per cent, 90,000 tons of fluorine being added to the top soil annually in the United States through the use of superphosphate fertilizers.

Influenza and Distemper. In investigational work the filtrable virus of human and of swine influenza have both been found to be transmissible through the respiratory tract to ferrets and mice. The fact that the influenza virus of man induces an immunity in ferrets against the distemper virus of dogs has suggested a possible relationship between the disease in man and dogs.

Mastitis of Dairy Cattle. With the sum of one million dollars allotted from Federal emergency funds the work of eliminating marked physical cases of mastitis from dairy herds required to meet strict municipal ordinances was commenced

in January. Funds were allotted to all the States but the largest amounts went to those located in what is known as the New York milkshed. By the end of June physical examinations for mastitis had been made in 3808 herds containing 94,919 cows of which 11,683 were found affected and removed. The average Federal payment was \$29.87 and the average salvage \$31.73. The owners of the herds were required to sign an agreement to attempt to control the disease and also to participate in the Bang's disease control programme.

Paralysis of the Fowl. Investigations of the devastating fowl paralysis for which no specific treatment is known, conducted in Florida, led to the conclusion that the bacterium *Salmonella aertrycke* plays an important part in its causation.

Parasite Control, Livestock. The administration of carbon tetrachloride in gelatin capsules to ten weeks old chickens at the rate of 4cc. per kilo of body weight was found to be 100 per cent effective in removing the fowl roundworm and practically free from toxic effects. An investigator in England reported that the more serious effects of roundworm infestation of sheep and lambs grazing on permanent pasture can be prevented by the repeated administration of large doses of a 5 per cent solution of copper sulphate containing 5 per cent of a 40 per cent solution of nicotine sulphate. The drug foudadin was used against infestations of the dog heartworm (*Dirofilaria immitis*) with quite satisfactory results.

Respiratory Affections of the Fowl. A severe type of coryza that has appeared among chickens was under investigation in several States, the causative bacterium having been isolated. The respiratory disease clinically similar to infectious laryngotracheitis but immunologically distinct which has appeared in various sections of the country was the subject of investigation in a number of States. Preventive work with infectious laryngotracheitis led to an improved method of vaccination. Observations indicate that chickens cease to be carriers of the virus in about one week after having been vaccinated against it.

Sheep Scabies Eradication. In the work of sheep scabies eradication only a few scattered cases were found in the great range areas of the West and Southwest, these having been in Arizona, New Mexico, and Texas. The entire range originally quarantined appeared to be free from the disease. The principal centres of infection in 1935 were in South Dakota, Iowa, and Ohio. During the year 16,295,011 inspections were made in the field and 1,490,450 dippings supervised.

Tick Fever and Cattle Tick Eradication. The cattle tick eradication work during the fiscal year ended June 30 resulted in the release of an area of 12,852 square miles in Florida, Louisiana, and Texas from quarantine. In the course of the work 27,550,801 inspections or dippings of cattle and 2,734,249 of horses and mules were conducted. At the close of the fiscal year all but 9 per cent of the area (730,000 sq. miles) in 15 States placed under quarantine at the commencement of the work on July 1, 1906, had been released. Assistance was received from the Federal Emergency Relief Administration agencies of the States.

Tuberculosis Eradication, Bovine. The remarkable progress that has been made in the eradication of tuberculosis from the dairy and beef herds of the nation is far reaching as a public health measure as is well illustrated by the fact that in the State of Pennsylvania the human death rate from all forms of the disease other than pul-

monary has been reduced more than one half since the work was commenced. Fifteen States with more than 600 counties were added during the calendar year making 33 States with a total of approximately 79 per cent of all the counties in the United States that have practically eradicated tuberculosis from their herds.

This progress was made possible by the Federal appropriation of \$4,042,179 for the fiscal year ended June 30 and an emergency fund of \$13,750,000 for the 17 months ended December 1. The combined State and county appropriations were approximately \$9,000,000 for the year ended June 30. Approximately \$7,000,000 of Federal funds and \$6,000,000 of State funds were used for indemnity the average appraised value of reactors having been \$57.55. In the course of the work 25,237,532 tuberculin tests were applied to cattle of which 376,623 or 1.5 per cent were reactors. At the end of the fiscal year 5,590,863 herds containing 48,768,627 cattle were under supervision for eradication of the disease. In 43 States more than 50 per cent of the cattle were under supervision. During the course of the work which was commenced in 1917 a total of 155,527,683 head of cattle have been tested of which 3,302,561 have reacted and been removed for slaughter. The eighth survey conducted to determine the approximate extent of bovine tuberculosis in the various Counties of the United States which was completed May 1 indicated that the infection among cattle had been reduced to 0.6 per cent as compared with 4.0 per cent found in the first survey made in 1922.

A summary of the eradication work in Canada that is being conducted along lines quite similar to those followed in the United States, prepared by Lt. Col. T. Dunlop-Young, appeared in November (*Vet. Journ.* 91, p. 459). At the close of March there were 6790 herds fully accredited as free from tuberculosis, a total of 4,007,130 animals having been tested, with 2,251,771 under supervision. In recognition of the progress made in Canada the United States commenced on August 1 to admit all cattle from modified-accredited areas—areas in which the disease had been reduced to less than one half of 1 per cent, without further tuberculin testing.

Necrology. The year saw the passing of Dr. Marion Dorset at Washington, D. C. on July 14 at the age of 62. Dr. Dorset, who had served as Chief of the Biochemic Division of the Federal Bureau of Animal Industry since 1904, was best known for his work in the development of anti-hog cholera serum and the improvement and preparation of tuberculin used in the tuberculosis eradication campaign. Dr. Charles A. Cary, a past president of the American Veterinary Medical Association and dean of the College of Veterinary Medicine in Alabama from its organization in 1906, died on April 23 at the age of 74.

Bibliography. Works of the year include: E. H. Barger and L. E. Card, *Diseases and Parasites of Poultry* (Philadelphia, 1935); H. E. Dukes, *The Physiology of Domestic Animals*, (Ithaca, N. Y., 1935, 3d rev.); L. A. Merrill and D. M. Campbell, *Veterinary Military History of the United States, with a Brief Record of the Development of Veterinary Education, Practice, Organization and Legislation*, (Kansas City, Mo., 1935, 2 vols.); W. C. Miller (editor), *Black's Veterinary Dictionary*, (London, 1935, 2d ed. rev. and enl.); R. A. Runnells, *A Guide to the Study of Special Veterinary Pathology*, (Ames, Iowa, 1935); H. P. Hoskins (editor), *Proceedings*

Twelfth International Veterinary Congress, (Washington, D. C., 1935, 3 vols.); G. H. Wooldridge (editor), *Encyclopædia of Veterinary Medicine, Surgery and Obstetrics*, (London, 1935, 2 vols. 2d ed.).

VICTORIA. A State of Australia. Area, 87,884 sq. miles; population (Mar. 31, 1935), 1,839,363 exclusive of 596 (1933 census) aborigines (510 half-caste and 86 full-blood). During 1934 there were 27,828 births, 18,648 deaths, and 13,862 marriages. Chief towns (with 1933 census populations): Melbourne (capital), 992,048; Geelong, 39,225; Ballarat, 37,409; Bendigo, 29,131.

Production. The chief agricultural crops were wheat, oats, barley, potatoes, hay, and grapes. Live-stock in the State (Mar. 31, 1935): 16,783,631 sheep, 2,085,080 cattle, 357,877 horses, 265,006 pigs. Production (1933-34): Wool, 161,146,436 lb.; butter, 134,942,177 lb.; cheese, 8,363,233 lb.; bacon and ham, 17,935,453 lb.; wheat (1934-35), 25,850,528 bu. The total value of mineral production for 1934 was £1,091,864 of which gold accounted for £597,040; coal, £479,605; and tin, £3886. In 1933-34 there were 8896 factories, with 156,334 employees, from which the value of production was £44,201,645.

Government. For the year ended June 30, 1935, revenue amounted to £25,328,000; expenditure, £25,498,000; public debt (June 30, 1934), £172,972,000 (Australian £ averaged £4.0095 for 1934; \$3.8755 for May, 1935). Executive power was vested in a governor. Legislative power was vested in a parliament consisting of the legislative council (Upper House) of 34 members elected for six years, and the legislative assembly (Lower House) elected for three years. As a result of the election of Mar. 2, 1935, the numerical strength of the political parties in the legislative assembly was: 25 United Australia, 20 Country, 17 Labor, and 3 Independent. Governor in 1935, Lord Huntingfield; Premier, A. A. Dunstan. See AUSTRALIA under History.

VILNA. See POLAND and LITHUANIA under Area and Population and History.

VIRGINIA. Population. On Apr. 1, 1930 (Fifteenth Census), 2,421,851; July 1, 1934 (latest Federal estimate), 2,446,000; 1920 (Census), 2,309,187. Richmond, the capital, had (1930) 182,929 inhabitants; Norfolk, 129,710.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1935	1,534,000	39,884,000	\$29,913,000
	1934	1,461,000	35,794,000	31,141,000
Hay (tame)	1935	976,000	1,113,000*	12,911,000
	1934	960,000	948,000*	14,410,000
Tobacco	1935	117,100	95,500,000*	17,860,000
	1934	102,300	80,155,000*	18,380,000
Potatoes	1935	88,000	11,352,000	6,811,000
	1934	101,000	13,433,000	7,791,000
Apples	1935	.....	16,695,000	10,017,000
	1934	.....	9,275,000	8,069,000
Wheat	1935	601,000	8,714,000	7,581,000
	1934	578,000	8,092,000	7,768,000
Peanuts	1935	153,000	160,650,000*	5,141,000
	1934	147,000	147,000,000*	5,145,000
Cotton	1935	53,000	30,000*	1,696,000
	1934	58,000	35,000*	2,112,000
Sweet potatoes	1935	35,000	4,060,000	2,233,000
	1934	34,000	3,910,000	2,972,000

* Tons. * Pounds. * Bales

Education. For the academic year 1934-35 the number of the inhabitants of school age was reckoned as 731,043. Enrollments of pupils in the public schools totaled 590,532. Of these, 479,650 were in

common schools or elementary grades, and 110,-882 were in high schools. The year's expenditures for public-school education in the State amounted to \$22,777,328. The teachers' yearly salaries (supervisors and supervising principals excluded) averaged \$730.

Charities and Corrections. The State Emergency Relief Administration, while it continued to distribute to the destitute unemployed the support supplied chiefly by Federal grants, prepared to give up its task as soon as the aid for this class should have been shifted entirely to the basis of wages paid for work on public undertakings and to the management of the Federal WPA.

The ordinary work of the State government in dealing with dependency, correction, and the defective class remained under the central authority of the State's Department of Public Welfare. This Department, headed by a Commissioner (Arthur W. James), included divisions severally covering child welfare, mental hygiene, service to veterans, mothers' aid, finance and statistics, organization and supervision, and institutions and inspection. The State industrial schools were controlled by boards of their own, but the Commissioner was a member of these boards, *ex officio*. Boards of directors of the State prisons and hospitals were associated with the Department. It also exercised supervision over children committed to State institutions or agencies, licensed and inspected institutions, and agencies of child welfare, inspected all institutions for the care or custody of persons, aided the development of local services in that field, investigated applications for pardons, and handled the State's system of mothers' aid and its services to veterans.

Political and Other Events. The State's accounts as of the close of its fiscal year on June 30 showed a balance of \$585,560 of revenue over expenditure. The showing was due in part to the successful operation of the State's monopoly of the sale of liquor at retail. In part also it could be ascribed to the State government's not having had to make any considerable appropriation to the cost of support for the indigent unemployed. This cost had run far below the average per capita for the nation in 1934 and tended to decrease in 1935. The total paid for public support to the unemployed in Virginia in 1934 was reported by the FERA as \$7,682,257; this came to some \$3.15 *per capita* of the State's population, or somewhat over one-fourth of the figure for the entire country. The FERA paid 87.7 per cent of the cost in the State.

The State still held at the end of May, 1935, some 50,000 families and single individuals dependent on the dole. Their total was made up mainly of industrial workers in cities; the condition of agriculture as a whole was described as satisfactory. Senator Byrd, to whose influence was ascribed the State's not having made any appropriations toward sharing the costs of the FERA, and Governor Peery organized job-finding committees to stimulate the reemployment of the idle by a campaign during the summer.

Officers. The chief officers of the State, serving in 1935, were: Governor, George C. Peery; Lieutenant-Governor, James H. Price; Secretary of the Commonwealth, Peter Saunders; Treasurer, A. B. Garthright; Auditor, S. McCarthy Downs; Attorney-General, Abram P. Staples; Superintendent of Public Instruction, Dr. Sidney B. Hall.

Judiciary. Supreme Court of Appeals: President, Preston W. Campbell; Associate Justices, John W. Eggleston, H. W. Holt, E. W. Hudgins,

H. B. Gregory, George L. Browning, Joseph W. Chinn.

VIRGINIA, UNIVERSITY OF. A nonsectarian institution of higher education at Charlottesville, Va., founded in 1819. The enrollment for the autumn session of 1935 was 2368. In the extension division were 1264 students. The 1935 summer session had an attendance of 1458. The faculty numbered 148. The productive endowment amounted to \$10,000,000. The library contained approximately 270,000 books. The Thornton Hall of Engineering was completed and opened in 1935, and an addition to the hospital was nearing completion. President, John Lloyd Newcomb, D.Sc., LL.D.

VIRGIN ISLANDS. An insular possession of the United States, consisting of 50 small islands situated about 60 miles east of Puerto Rico in the Caribbean Sea. The chief islands are St. Thomas (area, 28 sq. miles; population, 9834 in 1930); St. Croix (area, 84 sq. miles; population, 11,413 in 1930); and St. John (area, 20 sq. miles; population, 765 in 1930). Total area, 132 square miles; population in 1930, 22,012 (26,051 in 1917). St. Thomas, the capital, had 7036 inhabitants in 1930. Negroes comprised 78 per cent of the 1930 population, 12 per cent were of mixed race, and 9 per cent were white. The birth rate in the calendar year 1934 was 29.8 per 1000 inhabitants (26.3 in 1933) and the death rate was 19 per 1000, the lowest rate on record, against 21.9 per 1000 in 1933. The 1930 census showed that 16.1 per cent of the adult population was illiterate. Enrollment in the public schools was 3460 in 1934-35, including 638 in high-schools. Seven new school buildings were completed with the aid of PWA grants in 1934-35.

Production, etc. The principal industries are the production of sugar and bay rum, cattle raising, the bunkering and supplying of ships, and local handicrafts. These sources of income were supplemented by a rapidly growing tourist trade following the opening of the government-owned Bluebeard Castle Hotel in St. Thomas on Christmas Day, 1934. Sugar production in 1934-35 was 1670 tons (4088 in 1933-34); rum, 250,000 gal.; cattle (exports), 2271 (1818 in 1933-34). Sales of the handcraft coöperatives of St. Thomas and St. John totaled \$23,372 (exclusive of hooked rugs) in 1934-35; hooked rugs, \$5487. In the calendar year 1935 imports from the United States were \$1,666,415 (\$1,544,424 in 1934) and exports to the United States were \$489,126 (\$575,052 in 1934). During 1934-35 549 ocean-going ships, with a total gross tonnage of 2,568,452 tons, entered the harbor of St. Thomas. This was 38 ships more than in 1933-34 and 44 ships more than the preceding 15-year average of 505. The bunkering of ships also showed a 37 per cent increase due to the removal of harbor dues. Dredging and other improvements to the port were under way. A weekly air service connected St. Thomas with the Pan American Airways network at San Juan, Puerto Rico.

Government. The Virgin Islands are administered through the Department of the Interior. Executive power under the Organic Act of Mar. 3, 1917, is vested in a governor appointed by the President of the United States. Full American citizenship was granted the natives by the Act of Feb. 25, 1927. The two administrative units are the Municipality of St. Thomas and St. John and the Municipality of St. Croix. Each has a legislative body (Colonial Council), of 15 and 18 members, respectively, with a minority of the members appointed by the Governor and the remainder elected by restricted suffrage. Gov. Paul M. Pearson

resigned in 1935 and on July 23, 1935, Lawrence W. Cramer, the Lieutenant-Governor, was appointed to succeed him.

Revenues of the two municipalities in 1934-35 totaled \$272,917 (\$225,562 in 1933-34) and expenditures totaled \$463,022 (\$377,320 in 1933-34). Federal appropriations made available to the Virgin Islands during 1934-35 totaled \$364,023, the lowest figure since 1930. However, additional grants of \$376,680 were made by the Washington authorities under the National Recovery Programme. Expenditures under the National Recovery Programme totaled \$893,514, the excess of expenditures over grants being covered by unexpended balances from the previous year.

History. The violent political controversy which raged in official circles in the Virgin Islands during 1934 developed in intensity in the first half of 1935. It resulted in an investigation by the Senate Committee on Territories and Insular Affairs under Senator Tydings and finally in the intervention of President Roosevelt, who on July 23 transferred both Governor Pearson and District Judge T. Webber Wilson from their posts in the Virgin Islands to new positions on the mainland. Lawrence W. Cramer, who as Governor Pearson's assistant had been Lieutenant Governor of St. Croix since 1931, was appointed to the governorship and Judge Albert Levitt was appointed by Attorney General Cummings to succeed Judge Wilson. Mr Cramer's inauguration on August 31 was followed by a marked recession of the violent passions aroused among the islanders, which had threatened to result in serious civil disorders.

Partisan opposition to Governor Pearson and his associates, who were holdovers from the Hoover Administration, and the hostility of the ruling class of island property owners and business men to the Governor's rehabilitation programme were apparently the principal causes of the political tempest. In this struggle, marked by unconfirmed charges of corruption and inefficiency against Mr Pearson and counter-charges of obstruction and of petty partisanship leveled at Judge Wilson, the Pearson administration enjoyed the staunch support of Secretary of Interior Ickes while the opposition forces in the Islands were supported by Democratic spokesmen in Congress. The arrival in the Islands in May of investigators for the Senate committee proved the occasion for riotous demonstrations by opponents and supporters of the Governor and for scenes of partisan fury in the Colonial Councils. The local anti-Pearson journal, the *Liberator*, was sued for libel by the Insular Government following its statement that officials had intimidated witnesses at the hearings. Hearings before the Senate Committee were in full swing in Washington, with Secretary Ickes demanding an opportunity to be heard and accusing the committee of attempting to "whitewash" Judge Wilson and his allies, when President Roosevelt finally intervened. His appointment of Mr. Cramer was made on the recommendation of Secretary Ickes.

The President took a further step designed to end unrest and agitation on the Islands through an executive order issued August 22 which authorized the Governor to administer the reconstruction programme already under way. He thus gave notice that there would be no interference with the far-reaching plans launched by the Pearson Administration for the rehabilitation of the islands through various government-owned and cooperative enterprises. The revival of the sugar and rum industries on St. Croix consequently was contin-

ued by the Virgin Islands Co., a nondividend corporation established with Federal funds, whose profits or savings were to be redistributed to the people in the form of social security and welfare legislation. The settlement of homesteaders on small farm plots purchased by the government from large landowners also proceeded. By June 30, 1935, 255 such homesteads had been established in St. Croix and about 60 in St. Thomas. The new Virgin Islands National Bank, organized with funds supplied by the Reconstruction Finance Corporation to take the place of the retiring National Bank of the Danish West Indies, opened its doors on May 1, 1935. Further aid to the Island of St. Thomas was extended through the decision of the Navy Department to establish a marine air base there and to maintain a naval training ship in the harbor.

Consult Ralph Thompson, "The Promise of the Virgin Islands," *Current History*, March, 1935, and Luther Harris Evans, "Unrest in the Virgin Islands," *Foreign Policy Reports*, Mar. 27, 1935.

VITAL STATISTICS. In its provisional summary of mortality statistics in the United States, the Bureau of Census announced that in 1934 the number of deaths from all causes rose from 1,342,073 as reported in 1933 to 1,396,903, representing a mortality rate of 11.0 per thousand estimated population as against 10.7 per thousand in 1933.

The table on page 750 gives the number of deaths and the death rate in each year from 1932 to 1934, inclusive, for each cause according to the titles of the International List of Census of Deaths. Of the 18 groups of causes of death into which this table is divided, 11 show increases in rates as compared with the previous year, 5 show decreases, and 2 show virtually no change. The cause, "diseases of the circulatory system," showing a pronounced increase in each of the past several years, has shown another sharp rise, with several causes within this group having similar marked increases.

The most marked decrease in major causes are those arising from "infectious and parasitic diseases," with declining rates in poliomyelitis and tuberculosis contributing the major parts. Cancer not only continues in third place in the major division of causes, but has shown a marked increase in rate. Though the cause, "violent and accidental deaths," shows a sudden rise over the previous two years, it is nevertheless slightly lower than in 1931, with 1047 deaths per hundred thousand of estimated population. A supplemental table, not included herein, shows that accidents in which automobiles were the primary cause of death, rose to a total of 33,980 in 1934, as compared with 29,323 in 1933, and with 20,350 in 1932.

VITAMINS. See BIOLOGICAL CHEMISTRY; DAIRYING

VOLK, (STEPHEN ARNOLD) DOUGLAS. An American painter, died at Fryeburg, Me., Feb. 7, 1935. The son of Leonard Volk, he was born at Pittsfield, Mass., Feb. 23, 1856, and received his art education at St. Luke's Academy, Rome and at the École des Beaux Arts, Paris, where he studied under Gérôme. In the Paris Salon of 1875 he exhibited "In Brittany," and in that of 1878, his portrait of Miss Tuttle.

Upon his return to America in 1879, he became an instructor at Cooper Institute, New York, where he remained until 1884. Two years later he went to Minneapolis where he organized the Minneapolis School of Fine Arts. During this period of his career he painted many colonial subjects, in-

DEATHS AND DEATH RATES IN THE UNITED STATES REGISTRATION AREA, 1934, 1933, 1932

Cause of death	Number of deaths			Rate per 100,000 estimated population		
	1934	1933	1932	1934	1933	1932
Total deaths (all causes)	1,396,903	1,342,073	1,308,529	1104.9	1067.7	1089.0
Infectious and parasitic diseases	148,124	155,813	156,979	117.2	124.0	130.7
Typhoid fever	4,162	4,389	4,363	3.3	3.5	3.6
Measles	6,986	2,813	1,941	5.5	2.2	1.6
Whooping-cough	7,518	4,463	5,364	5.9	3.6	4.5
Diphtheria	4,159	4,936	5,418	3.3	3.9	4.5
Influenza	21,868	33,193	37,066	17.3	26.4	30.9
Acute poliomyelitis, acute polioencephalitis	852	797	828	0.7	0.6	0.7
Epidemic cerebrospinal meningitis	1,272	1,482	1,677	1.0	1.2	1.4
Tuberculosis (all forms)	71,609	74,836	75,509	56.6	59.5	62.9
Respiratory system	64,706	67,417	67,789	51.2	53.6	56.4
Syphilis	11,726	11,039	10,684	9.3	8.8	8.9
Malaria	4,520	4,678	2,568	3.6	3.7	2.1
Cancers and other tumors	140,771	134,535	128,597	111.3	107.0	107.1
Cancer of the digestive tract and peritoneum	65,476	63,174	60,810	51.8	50.3	50.6
Cancer of the respiratory system	5,473	4,939	4,549	4.3	3.9	3.8
Cancer of the uterus	15,635	15,220	14,908	12.4	12.1	12.4
Cancer of the breast	13,171	12,484	11,889	10.4	9.9	9.9
Cancer of the male genitourinary organs	11,342	10,455	9,594	9.0	8.3	8.0
Rheumatic diseases, nutritional diseases, diseases of the endocrine glands, and other general diseases	42,568	41,614	40,983	33.7	33.1	34.1
Diabetes mellitus	28,000	26,835	26,368	22.1	21.3	22.0
Pellagra	3,602	3,955	3,694	2.8	3.1	3.1
Diseases of thyroid and parathyroid glands	4,228	4,114	4,344	3.3	3.3	3.6
Diseases of the blood and blood-making organs	10,250	10,186	9,866	8.1	8.1	8.2
Chronic poisonings and intoxications	3,921	3,561	3,300	3.1	2.8	2.7
Alcoholism (acute or chronic)	3,655	3,297	3,049	2.9	2.6	2.5
Diseases of the nervous system and of the organs of special sense	134,365	130,957	129,665	106.3	104.2	107.9
Meningitis	2,360	2,411	2,359	1.9	1.9	2.0
Cerebral hemorrhage, cerebral embolism, and thrombosis	108,110	105,554	104,897	85.5	84.0	87.3
Diseases of the circulatory system	333,296	314,000	295,509	263.6	249.8	246.0
Chronic endocarditis, valvular diseases	57,762	58,900	61,335	45.7	46.9	51.1
Diseases of the myocardium	136,726	130,484	125,526	108.1	103.8	104.5
Diseases of coronary arteries, angina pectoris	54,089	47,486	37,346	42.8	37.8	31.1
Other diseases of the heart	50,864	45,174	40,023	40.2	35.9	33.3
Arteriosclerosis (coronary arteries excepted)	22,696	21,062	20,534	18.0	16.8	17.1
Diseases of the respiratory system	114,879	100,546	105,935	90.9	80.0	88.2
Bronchitis	4,145	4,062	4,338	3.3	3.2	3.6
Bronchopneumonia (including capillary bronchitis)	41,923	37,209	39,174	33.2	29.6	32.6
Lobar pneumonia	54,794	45,738	49,524	43.3	36.4	41.2
Diseases of the digestive system	95,961	92,570	87,300	75.9	73.6	72.7
Diseases of buccal cavity and annexa and of pharynx, tonsils	5,970	5,680	5,191	4.7	4.5	4.3
Ulcer of stomach and duodenum	7,690	7,538	7,192	6.1	6.0	6.0
Diarrhea and enteritis (under 2 years of age)	17,019	15,706	14,375	13.5	12.5	12.0
Diarrhea and enteritis (2 years and over)	6,192	5,966	5,244	4.9	4.7	4.4
Appendicitis	18,129	17,717	17,111	14.4	14.1	14.2
Hernia, intestinal obstruction	13,023	12,607	12,269	10.3	10.0	10.2
Cirrhosis of liver	9,733	9,349	8,681	7.7	7.4	7.2
Diseases of the genitourinary system	125,171	121,571	120,631	99.0	96.7	100.4
Chronic nephritis	93,922	90,804	92,051	74.3	72.2	76.6
Nephritis, unspecified (10 years and over)	8,154	8,727	8,377	6.4	6.9	7.0
Disease of prostate	8,357	7,690	6,730	6.6	6.1	5.6
Diseases of pregnancy, childbirth, and the puerperal state	12,859	12,884	13,293	10.2	10.3	11.1
Diseases of the skin and cellular tissue	2,144	2,133	1,895	1.7	1.7	1.6
Diseases of the bones and organs of locomotion	1,694	1,596	1,606	1.3	1.3	1.3
Congenital malformations	12,640	12,112	12,363	10.0	9.6	10.3
Diseases of early infancy	54,348	51,450	51,571	43.0	40.9	42.9
Congenital debility	4,223	4,067	3,860	3.3	3.2	3.2
Premature birth	35,102	32,951	33,143	27.8	26.2	27.6
Injury at birth	9,860	9,506	9,681	7.8	7.6	8.1
Other diseases peculiar to early infancy	5,163	4,926	4,887	4.1	3.9	4.1
Semility	10,961	11,318	10,207	8.7	9.0	8.5
Violent and accidental deaths	132,022	123,201	117,830	104.4	98.0	98.1
Suicide	18,828	19,993	20,927	14.9	15.9	17.4
Homicide	12,055	12,123	11,035	9.5	9.6	9.2
Accidental, other, or undefined	101,139	91,085	85,868	80.0	72.5	71.5
Burns (conflagration excepted)	5,758	5,232	5,358	4.6	4.2	4.5
Drowning	6,006	6,219	6,199	4.8	4.9	5.2
By firearms (wounds of war excepted)	3,023	3,025	2,928	2.4	2.4	2.4
By fall, crushing, landslide	32,854	29,376	26,677	26.0	23.4	22.2
Ill-defined causes of death	20,929	22,026	20,999	16.6	17.5	17.5

cluding "The Puritan Maiden" (1881), "The Puritan Captives" (1882), and "Accused of Witchcraft" (1884), the latter being in the Corcoran Gallery at Washington. In 1893 he was back in New York and became an instructor at the Art Students' League. He remained with this school until 1898. He also taught at Cooper Union from 1906 to 1912, and at the National Academy of Design from 1910 to 1917. He served on the art jury at the Chicago World Fair, where several of his own works were exhibited, in 1893.

Mr. Volk first started as a landscape painter and later in his life turned to portrait painting, for which he is better known, although his landscapes

show a marked skill. A conservative of the conservatives, his work had nothing in common with the modern trend, and his paintings were good in drawing, carefully composed, and pleasing in color. His many portraits of Lincoln indicated a remarkable knowledge of the man's character, physique, and lineaments, and one of his better portraits of the Emancipator was acquired by the Albright Art Gallery, Buffalo, N. Y., in 1923.

Good examples of Volk's work, which is to be found in most American public collections, include: Portrait of his wife and son, the Carnegie Museum, Pittsburgh; "The Young Pioneer," a portrait of Felix Adler, and "Little Mildred," all in the Met-

ropolitan Museum, New York; "Boy with Arrow," National Gallery, Washington; "Among the Lilies," National Arts Club, New York; "Puritan Mother and Child," Carnegie Institute, Pittsburgh. Among his mural decorations are those of "Father Hennepin" and "The Battle of Missionary Ridge" in the Minnesota State Capitol at St. Paul, and "The Trading Post" in the Des Moines, Iowa Courthouse. His portraits of King Albert, General Pershing, and Lloyd George, which were painted from life, are in the collection of World War heroes in the National Gallery, Washington.

He was elected a member of the National Academy in 1899 and of the Architectural League in 1912, and received many prizes and awards, including medals at expositions in Chicago (1893), Buffalo (1901), St. Louis (1904), and San Francisco (1915); Proctor portrait prize (1910); Salus Gold Medal, National Academy of Design (1911); Gold medal of National Arts Club (1915), and the Beck gold medal of the Pennsylvania Academy of Fine Arts (1916). In 1920 he was made an officer of the Order of Leopold II, and his views on art education were printed in *Art Education in the Public Schools*.

VORARLBERG. See AUSTRIA.

VOS, vös, HUBERT. An American portrait and genre painter, died in New York City, Jan. 8, 1935. Born in Maestricht, Holland, Feb. 17, 1855, his talent attracted the attention of Hean Portaels, president of the Brussels Royal Academy, who persuaded him to study art, with the result that Vos entered the Academy. He remained there for two years, when the Dutch Government financed his studies in Rome. Subsequently, he studied under Ternan Cormon.

He first exhibited at the Paris Salon of 1886, where his painting, "A Room in a Brussels Alms-house" was awarded a gold medal. This work was later acquired by the Maestricht Town Hall. In the Salon of 1890 he exhibited "Portrait of the Russian Ambassador" and "Angelus on the Zuyder Zee," which won a gold medal. Other awards received during the course of his career were a gold medal at Munich for "Pauvre Gens," and a *diplome d'honneur* at Dresden for a pastel done in Ireland representing "Home-Rulers."

In 1892, Mr. Vos was sent by the Dutch Government to Chicago as the Art Commissioner for Holland at the World's Fair. For a time he lived in London, but so well did he like America that he subsequently returned and became a citizen. It was while at the Fair that he conceived the idea of a world tour to study aboriginal peoples. About 40 canvases resulted from this tour and they were exhibited throughout the world.

A portrait painter of distinction, his work, a combination of the Dutch and Flemish schools, was characterized by an ability to bring out the man rather than merely a face, and he became known as a painter of psychological studies. He painted many Eastern rulers, including Yuan Shih-kai, first president of the Chinese Republic, the Emporer of Korea, and the Dowager Empress of Japan (1905). Other portraits were of three generations of the Wadsworth family, Lewis Nixon, Judge and Mrs. Elbert H. Gary, Mrs. Jay Gould, Arthur Curtiss James, and Hugh D. Auchincloss, the last completed in 1934. Also, he did some still life paintings of Chinese porcelains, one of which is in the Luxembourg.

Mr. Vos was a member of the Royal Society of British Artists, and a founder of the Society of

Pastellists and the Society of British Portrait Painters.

WAGES. See STATISTICS.

WAGNER-CONNERY LABOR RELATIONS ACT. See UNITED STATES under Congress.

WAGNER-CROSSER RAILROAD RETIREMENT ACT. See RAILWAYS; UNITED STATES under Congress.

WAKE ISLAND. An isolated island in the Pacific 2130 miles west of Hawaii, owned by the United States since 1899. It is a typical coral atoll, with a shallow, enclosed lagoon. Mangrove trees in the tidal flats and other shrubs provide ample fuel for distilling fresh water. The total land area is about 2600 acres, lying about 10 to 15 feet above sea level. During 1935 the island became a base for the transpacific air service of Pan American Airways. The island was placed under the administration of the U.S. Navy Department by an executive order in January, 1935. There were 26 men on the island, including six members of the airport staff, when regular air service was inaugurated late in November. See AERONAUTICS under *Trans-Oceanic Air Service*.

WAR. See BOLIVIA, CHINA, ETHIOPIA, INDIA, and the various European countries under *History*; MILITARY PROGRESS; NAVAL PROGRESS.

WAR DEBTS. See REPARATIONS and WAR DEBTS.

WASHBURN COLLEGE. A coeducational institution in Topeka, Kan., founded in 1865. The enrollment for the autumn session of 1935 was 874. There were 70 faculty members. The endowment was \$1,192,911, and the income for the year \$193,470. The library contained approximately 40,000 volumes. President, Philip C. King, D.D.

WASHINGTON. Population. On Apr. 1, 1930 (Fifteenth Census), 1,563,396, July 1, 1934 (latest Federal estimate), 1,608,000; 1920 (Census), 1,356,621. Seattle had (1930) 365,583 inhabitants; Spokane, 115,514, Tacoma, 106,817; Olympia, the capital, 11,733.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934.

Crop	Year	Acreage	Prod Bu	Value
Wheat	1935	1,994,000	45,577,000	\$30,992,000
	1934	1,883,000	37,346,000	27,211,000
Apples	1935	.....	31,390,000	21,973,000
	1934	.....	33,000,000	24,750,000
Hay (tame) ..	1935	898,000	1,741,000 ^a	14,450,000
	1934	901,000	1,795,000 ^a	15,796,000
Potatoes ...	1935	38,000	6,270,000	4,389,000
	1934	45,000	7,290,000	3,937,000
Oats	1935	196,000	9,408,000	3,011,000
	1934	170,000	6,800,000	2,992,000
Hops	1935	6,300	11,340,000 ^b	780,000
	1934	6,300	10,395,000 ^b	1,175,000
Barley	1935	68,000	2,018,000	928,000
	1934	59,000	1,770,000	938,000
Corn	1935	32,000	1,200,000	900,000
	1934	34,000	1,122,000	920,000

^a Tons. ^b Pounds.

Education. The enrollments of pupils in the public schools during the academic year that ended with June 30, 1935, numbered 335,771, a total somewhat less than that for the year previous. Of the year's enrollments, 4228 were in kindergartens; 232,069, in the elementary grades; 99,474, in high schools, exclusive of postgraduate students. The current expenditures of the year, for public-school education, amounted to \$20,529,270; the total expenditures, outlay and service of debt included, to \$23,254,707. Both totals were substantially higher than the corresponding ones for the year before.

The year's salaries of the teachers averaged \$1256; this average exceeded the previous year's by 4 1/4 per cent.

Legislation. The regular session of the Legislature enacted a tax of 2 per cent of the paid price on retail sales of merchandise. In order to remove the temptation for the inhabitants to cross the border and make purchases in Oregon tax-free, it included in its Revenue Act a provision taxing, also at 2 per cent of cost, goods bought outside of the State and brought in. An effort was made to escape the Federal constitutional prohibition of the levying of duties by States on imports into their territory; the levy was called "a tax or excise for the privilege of using within the State any article . . . purchased." The law went into effect on May 1.

A system of insurance against unemployment was created, with a view to qualifying the State for the Federal subventions to State systems of this character, under the terms of the Federal Social Security Act. In order to meet the payment of the State's share of the specified allowances to persons who had lost employment, the law imposed on employers the continuous payment of a tax at the rate of 3 per cent of their payrolls. The proceeds were to pass into a central fund available for allowances to the unemployed. The act was permissive as to the creation of this system; it was designed to go into effect when the Federal enactment had been completed.

The State's laws to restrain the practice of "birth control," as by restricting the sale of articles for that purpose, were repealed.

Political and Other Events. The grants of Federal money toward the support of the needy unemployed in the State were suspended on March 1, to compel the State to contribute to that purpose the part of the cost demanded by the FERA. For 1934 the total cost of this support, as reported by the FERA on Mar. 1, 1935, had been \$16,685,177, of which the FERA had met 82 1/2 per cent. The total for that year came to some \$10 1/3 per capita of the State's population, as against a corresponding rate of about \$12 for the entire nation.

In order to collect the State's new sales tax to the nearest fifth of a cent the State Tax Commission issued in April 1,000,000 token coins made of aluminum and bearing each the face value of 1/5 cent. Some of the banks refused to handle these coins, judging that as the Constitutional monopoly of coinage rested in the Federal Government, the tokens could not be classed as money. The State Supreme Court, on the other hand, ruled in August that the tokens might be used in continuous circulation; the number of those issued was increased.

In the lumber industry of Washington, as in that of Oregon, strikers halted or delayed operations in the late spring and early summer. At Tacoma there occurred repeated and serious disorder; mobs on the strikers' side attacked persons attempting to go to work at lumber yards and saw mills, and a force of National Guards and of police was used to break up the mobs. See **STRIKES AND LOCKOUTS**.

Under the Federal laws against abduction over State borders, Harmon M. Waley and his wife were convicted of having kidnaped George Weyerhaeuser, the young son of a wealthy family of timber-owners. The boy had been seized on May 24, taken to Idaho, and released on June 1, reportedly on the payment of a ransom of \$200,000.

Through initiative and referendum there was put in effect a restriction on the power of taxing

bodies to levy *ad-valorem* for the purpose of meeting any new bond obligations that they should contract; the limit was set at 40 mills on the dollar of valuation, but did not apply to service of bonds already outstanding. The effect was adverse to the possibility of cities' refunding their maturing or callable bonds with new issues.

Officers. The chief officers of the State, serving in 1935, were: Governor, Clarence D. Martin; Lieutenant-Governor, Victor A. Meyers; Secretary of State, Ernest N. Hutchinson; Treasurer, Otto A. Case; Auditor, Cliff Yelle; Attorney-General, G. W. Hamilton; Superintendent of Public Instruction, N. D. Showalter.

Judiciary. Supreme Court: Chief Justice, W. J. Millard; Associate Justices, Walter B. Beals, Warren W. Tolman, John R. Mitchell, John F. Main, O. R. Holcomb, W. J. Steinert, Bruce Blake, J. M. Geraghty.

WASHINGTON, THE STATE COLLEGE OF. A coeducational institution for higher learning at Pullman, Wash., founded in 1890. The enrollment for the autumn of 1935 was 3525. The 1935 summer session had an attendance of 715. There were 361 faculty members. The land-grant endowment amounted to \$3,395,636, while the income for the year was \$1,822,173. The library contained approximately 295,000 volumes. In cooperation with the Public Works Administration, the State of Washington, and the State College, a new chemistry building, a science building, and a modern power plant were completed and opened. A new men's dormitory housing 160 students was erected. President, Ernest O. Holland, Ph.D.

WASHINGTON, UNIVERSITY OF. A State institution of higher education in Seattle, Wash., founded in 1861. The enrollment for the autumn of 1935 was 9217. The 1935 summer session had an attendance of 3130. There were 556 members in the faculty (not including 98 laboratory or student assistants, or readers) during the autumn of 1935. For the biennium 1935-37 the estimated amount of endowment and income combined was \$6,154,103 (comprising all estimated receipts including Building funds). The university library contained 297,246 volumes and the law library 77,789 volumes. A new infirmary, dormitory, and addition to the power plant were under construction at an estimated total cost of \$950,000. President, Lee Paul Sieg, Ph.D.

WASHINGTON AND JEFFERSON COLLEGE. An institution for the higher education of men in Washington, Pa., which had its origin in the Washington Academy, founded in 1787. The enrollment for the fall semester of 1935-36 totaled 452 undergraduates and 38 graduate students. The 1935 summer session enrollment was 100. The faculty numbered 35. The productive funds of the college amounted to \$1,507,957.66, and the income from all sources was approximately \$238,554.08. The library contained 52,960 volumes. President, Ralph Cooper Hutchison, Ph.D., D.D.

WASHINGTON AND LEE UNIVERSITY. A nonsectarian institution for the higher education of men, in Lexington, Va., founded in 1749. The enrollment for the autumn of 1935 was 943. There were 57 members on the faculty. The productive funds of the university amounted to \$1,536,138, and the income for the year was \$282,859. The number of volumes in the library was approximately 70,000. President, Francis Pendleton Gaines, Ph.D.

WASHINGTON UNIVERSITY. A nonsectarian institution of higher learning for men and women in St. Louis, Mo., founded in 1853. The en-

rollment on Nov. 1, 1935, was 7236. The faculty numbered 593. The income for the year 1934-35 was \$2,368,503. Chancellor, George R. Throop, Ph.D., LL.D.

WATER-POWER. Most of the new hydro-electric construction during 1935 was in Government projects. None of these, however, had progressed to the stage of completion although some units are scheduled to go into operation in 1936. Despite this, the output of existing privately owned hydro-electric plants attained a new record of approximately 39 billion kilowatt-hours, or about 40 per cent of the total central station output which reached an all-time record.

Construction on Boulder Dam, the most outstanding of the hydro developments, was pushed forward during the year and was well ahead of schedule. The dam, itself, was completed and in 1936 there was to be impounded 4,500,000 acre-feet of water to regulate the flow of the Colorado River and prevent the usual serious spring flood conditions. The power house will start initial operation in 1936 with four 115,000-h.p. and one 55,000-h.p. units. Two additional 115,000-h.p. units have been ordered, which will make a total of 752,000 h.p., including the two 3500-h.p. auxiliary units.

The Norris and the Wheeler Dams of the Tennessee Valley Development are nearing completion. The former will add 132,000 h.p. and the latter 45,000 h.p. during the year to the 260,000 h.p. capacity already installed at Wilson Dam, making a total of 437,000 h.p. for the development. It is planned to increase this from time to time. The power house at Wheeler Dam has been laid out for eight units, the second 45,000-h.p. machine having already been ordered. These water wheels are of the fixed-blade propeller type and have the largest capacity of any machines of their kind in the world.

Another much-talked-of Federal project, the Grand Coulee Development in the State of Washington, was changed from a low-dam power development to an irrigation project although foundations are being put in to permit changing to a high dam at some future time, which will make possible the installation of 2,700,000 h.p. if the power demands in that section warrant.

Similarly the Parker Dam, 150 miles below Boulder Dam, will not have any power-generating equipment installed for the present but will be utilized for flood control and irrigation. It will make possible the development of 110,000 h.p. if requirements of the future warrant.

At the Bonneville Development, another Federal project near Portland, two 60,000-h.p. turbines of the Kaplan type, the largest of their kind, are being installed. This project is planned for an ultimate capacity of 600,000 h.p.

The Diabola Development for the city of Seattle, upon which work had been suspended, was completing the installation of two 83,000-h.p. units. The ultimate capacity of this plant will be 332,000 h.p.

Among some of the smaller and medium size hydro-electric plants automatic operation is again receiving attention.

In Canada an important addition to hydro-electric capacity during the year was three 53,000-h.p. units at the Beauharnois Development on the St. Lawrence River. The addition of these three units makes a total of eight in this plant. Two more similar units are on order. Another Canadian development, the Abitibi Canyon plant of the Hydro-Electric Commission of Ontario, installed three 66,000-h.p. units.

The proposed St. Lawrence Development on the International Section of the river which has been pending for several years received a setback in 1934 through failure of the United States Senate to ratify the treaty with Canada. Despite expectations, nothing further was done during 1935 to press ratification of the treaty.

Research in the water power field has centred principally on cavitation studies.

The total installed water wheel capacity in the United States Dec. 31, 1935, was approximately 16 million horsepower and about 1½ million horsepower was being installed, about half of which will go into service in 1936. In Canada the installed capacity is about 7½ million horsepower. See DAMS.

WATERWORKS AND WATER TREATMENT. About 11,000 waterworks systems now supply some 12,000 American cities and towns with water. About 63 per cent of the 1930 population of the United States lives in communities having public water service. (See figures by states, *Journal American Water Works Association*, January, 1935, pp. 91-93.) Considerably more than half of these waterworks deliver water from underground sources, according to data compiled by the U.S. Geological Survey. (*Public Works*, March, 1935, pp. 12-13.) The largest city supplied entirely by wells is Houston, Texas (pop., 292,352 in 1930).

Boston, Denver, San Francisco, and Southern California Projects. Progress on the Boston metropolitan and other large additional water supply projects noted in earlier YEAR BOOKS continued in 1935. At Denver modifications were made in the plan for bringing water eastward from the western slope of the Front Range of the Rocky Mountains through an enlargement of the pilot tunnel used to drive the Moffat railway tunnel. (*Engineering News-Record*, September 12, pp. 357-58.) Supplementary work on the new Hetch Hetchy supply for San Francisco includes an 85-ft. addition to the Hetch Hetchy or O'Shaughnessy Dam, bringing the overall height from crest to the lowest point in the foundation to 429 ft. and adding 70 per cent to the capacity of the reservoir. Late in the year the Metropolitan Water District of Southern California invited bids for the five pumping stations that will lift water from the Colorado River through the large and long aqueduct that will supply water to Los Angeles and adjacent communities. One of these stations will take water from the intake reservoir formed by the Parker Dam. The other four plants will serve as relay stations. Ultimately each station will contain nine electric-driven pumps, each with a capacity of about 200 cubic feet per second. Electric current will be supplied from the power plant at the Boulder Dam, 150 miles upstream. Construction of the Parker Dam was halted for a time by a U.S. Supreme Court injunction obtained by the State of Arizona. Work was resumed on specific authorization of Congress as an amendment to the Rivers and Harbor Bill. Studies for softening the Colorado River water are being made for the Southern California Water Supply District. To tide over the water supply of Los Angeles pending the completion of the Colorado River Aqueduct the city is extending the Los Angeles Aqueduct by an 11.3-mile tunnel to the Mono Basin, which lies in a latitude farther north than San Francisco. Additional electric power as well as more water will be obtained.

Chicago, FILTERS AND METERS FOR In July the legislature authorized the city to sell \$63,000,000 of bonds during 1936-41 to provide water treatment. The first part of the programme is the construction

of a 385- to 500-million gallon plant to serve the southern part of the city. This plant, together with universal metering in the area it will serve, will cost some \$20,000,000. Although not filtered, the water supply of Chicago is chlorinated. During the past year a plant for applying chlorine to kill bacteria and ammonia to control odor- and taste-producing micro-organisms was installed at the 68th St. and Dunne intake cribs located side by side in Lake Michigan. The daily supply drawn through these cribs and the tunnels leading from them to the pumping stations, where chlorine has been added heretofore, averages 360 million gallons and sometimes is 500 million. A scow will transport ammonia sulphate in 100-lb. bags and liquid chlorine in ton containers to one of the cribs. (For illustrated descriptions of the ammonia-chlorine equipment and the filter-and-meter project see *Engineering News-Record*, May 2, pp. 638-40, and Sept. 12, 1935, pp. 371-74.)

Colorado River Water for Irrigation. DESILTING THE. A method successfully employed to clarify muddy water for city supplies is to be utilized on an unprecedented scale to lessen the silt that otherwise would be carried into the All-American Canal and either clog it or require heavy annual dredging expenditures. This canal is to carry 15,000 cu. ft. per second eastward from the Imperial Dam, located on the Colorado River 250 miles below the Boulder Dam, to the Imperial Irrigation District south of the Salton Sea. Large settling basins at the head of the canal will be equipped with scrapers suspended from motor-driven revolving cantilever arms. The scrapers will sweep the deposited solids to a central point in each settling basin from which the silt will be discharged through conduits. By this means a large part of the 60,000 tons of silt carried daily by the diverted water will be kept out of the All-American Canal. (*Engineering News-Record*, Oct. 17, 1935, pp. 538-41.)

Detroit Adds Filters. The Spring wells filtration plant for Detroit, with a daily capacity of 272 million gallons, was completed in March, giving the city a filter capacity of 592 million gallons a day.

See **AQUEDUCTS AND DAMS.** An important new monograph is Baylis, *Elimination of Tastes and Odors in Water* (New York and London).

WATSON, SIR WILLIAM. An English poet, died at Ditchling Common, Sussex, Aug. 11, 1935. Born in Burley-in-Wharfedale, Yorks., Aug. 2, 1858, his early life was spent in Liverpool, whither his father had moved. His first volume of poetry, privately financed by his father, was *The Prince's Quest*, issued in 1880. Next he published *Epigrams of Art, Life, and Nature* (1884), quatrains, a form which proved a congenial medium. Recognition first came in 1890, when *Wordsworth's Grave* was issued, and it was believed that he would fall heir to the mantle of Browning, Arnold, and Tennyson. He again won acclaim for *Lachrimae Musarum* (1892), written on the death of Tennyson, and he was suggested for Poet Laureate.

With the publication of *The Purple East* (1896), in which he assailed England's treatment of Armenia, his popularity waned, and his sympathetic attitude toward the Boers, as well as his advocacy of the cause of Irish independence, detracted from, rather than added to, the position in which he was held. Again, his metrical attack on Mrs. Margot Asquith in *The Woman with the Serpent's Tongue* (1909) was not conducive to popularity.

Sir William's poetry was contemplative rather

than lyric, and except for his political sonnets, particularly free of passion. From the first, his work showed unmistakable signs of the influence of Keats, Tennyson, and Wordsworth, and the lucidity of his style, as well as the noble sentiments expressed, placed him in the classical tradition. With his death, an epoch of English poetry ended.

Twice the poet visited America, first in 1909 and again in 1912, the latter time to attend the Dickens Centenary in New York. To commemorate his visits he wrote "Hymn for America." In 1917 he was knighted, and on Nov. 13, 1930, was elected a corresponding member of the American Academy of Arts and Letters.

His works, other than those already mentioned, included: *Lyric Love* (1892); *The Eloping Angels* (1893); *Excursions in Criticism* (1893); *Odes, and Other Poems* (1894); *The Father of the Forest* (1895); *The Year of Shame* (1896); *The Hope of the World* (1897); *Collected Poems* (1898); *Ode on the Coronation of King Edward VII* (1902); *For England* (1903); *Collected Poems* (2 vols., 1906); *New Poems* (1909); *Sable and Purple* (1910); *The Heralds of the Dawn* (1912); *The Muse in Exile* (1913); *Pencraft: A Plea for the Older Ways* (1916); *Retrospection* (1916); *The Man Who Saw* (1917); *The Superhuman Antagonists* (1919); *Ireland Unfreed* (1920); *A Hundred Poems*, a selection from his various volumes (1922); *Poems Brief and New* (1925); *Selected Poems, with Notes by the Author* (1928).

WELFARE WORK. United States. The expenditure of funds for welfare work in the United States continued, during 1935, to be a major function of the Federal Government. According to a report on the source of relief funds, April, 1935-June, 1935, 98.8 per cent of the money distributed during those months came from public sources, but 1.2 per cent coming from private sources. The year opened with 20,654,085 persons on the rolls of the Federal Emergency Relief Administration. In that month Federal funds to a total of \$151,821,583 were made available for their maintenance, which sum was 77.3 per cent of the total cost. In the same month State funds accounted for 9.7 per cent and local funds for 13 per cent of the money expended. The tables printed below indicate the size of the relief load from January through September and the cost of maintaining it. It will be noted that there was a slow decline in numbers receiving aid from January—from 17 per cent of the population as estimated by the 1930 census to 12 per cent. Under the FERA most of the relief granted was in the form of direct relief, though there was a slow and constant increase in the number of persons employed on work projects, until a total of in excess of 1,250,000 individuals per month were earning their relief allowances. This development was in harmony with the President's aspiration to make it possible for relief recipients to earn their allowances rather than to obtain them as free gifts. However, he and his advisers became convinced that a shift of emphasis would have to be made. They therefore evolved the so-called Works Program "to provide relief, work relief, and to increase employment by providing for useful projects," known legislatively as the Federal Emergency Relief Act, approved Apr. 8, 1935. The Act appropriated \$4,000,000,000 together with \$880,000,000 from unexpended balances of the Reconstruction Finance Corporation and the Public Works Administration.

The expenditure of the money was to be under

the control of the President and was to be available until June 30, 1937, for the following general classes of projects: Highways including grade crossings, rural rehabilitation and relief, including water conservation and regulation, rural electrification, housing, assistance for educational, professional, and clerical persons, Civilian Conservation Corps, loans or grants or both for projects of states and other political subdivisions, and for self-liquidating projects of a public character, land and flood control, reforestation, etc. The object of this Act was, as stated above, to change the emphasis of the Federal Relief Program from direct relief to work relief, the theory behind the change being of a two-fold character. In the first place, it was desired to expend relief money in such a fashion that permanent improvements in the national physical plant could be made, and in the second place, it was believed that work of a useful kind would improve the morale of the relief recipients and act as a method of retraining them for private employment if and when available.

The programme early met profound opposition from two sources. During the months when the FERA had been chiefly a direct relief organization, the business interests organized in such groups as the Chamber of Commerce, had shifted from an opposition to the so-called dole to approval of it. They therefore opposed the Works Program on the ground of excessive expense as ardently as they had once denounced the dole as demoralizing. Opposition was also immediately aroused when the wage scales for the Works Relief Program were announced. It was freely alleged that the scales were not only unworkable but were a menace to the continuance of reasonable and decent scales in private industry, and they were therefore opposed by organized labor throughout the nation, even to the extent of strikes on works undertaken. The task of carrying out the major part of the undertakings under this relief programme was given to an organization called the Works Progress Administration, directed by Harry L. Hopkins, who held the similar position under FERA. Because of the opposition the programme aroused, and because of the inherent difficulties of finding suitable works projects for the relief recipients, most of whom were casualties of private industry and therefore not naturally fitted for public works activities, the programme was slow in getting under way and eventually was forced to compromise some of its fundamental tenets. After an initial effort to employ men at the trades they reported themselves as ordinarily following, resort was finally had to the so-called CWA method of giving a man a job regardless of his previous training. Moreover, the protests of the workers forced the revision upwards of the wage scales in some localities. Many local communities found it impossible to coöperate with the WPA and therefore left the workers on direct relief.

Moreover, it was the original theory of the undertaking that as the workers were transferred from direct relief to work relief, the old direct relief organization would be liquidated as far as the Federal Government was concerned, and the persons on the rolls in the local communities still requiring direct aid would be taken over as charges of the local community. These people, it was expected, would chiefly be "unemployables," and as such permanent relief cases. In practice it was discovered that not all employable persons in every community could be absorbed on WPA projects, and, also, it was discovered that many communities

were financially unable to assume the responsibility for the unemployables on their relief rolls. While the Federal Government persisted in its programme of discontinuing grants to cities in so far as possible, and while it announced the total liquidation of FERA in late November of 1935, there still remained large numbers of individuals on the relief rolls of the nation who, while employable, were not working on WPA projects, and others who by definition were unemployables, and could not count on aid from the local authorities. As the year closed, it was apparent that the Federal Government would have to remain in what the President had called the "relief business." That it will do so is indicated by the statement made by President Roosevelt during the week ending Nov. 23, 1935: "The Federal Government . . . does not propose to let people starve after the 1st of July any more than during the past few years." This position was also taken by Harry L. Hopkins, Works Progress Administrator: "The Government of the United States and its states and cities have put their hands to this plow, and it will never be taken away. We may change our methods and our expenditures but in one form or another these people at the bottom of the heap are going to get care."

Foreign. The relief programme continued to be to the fore in most of the nations of the world during the year 1935. In a learned study entitled "Aiding the Unemployed, a Survey of Methods and Trends in 24 Foreign Countries" Dr. Hertha Kraus outlined the various methods of meeting the problem. From this study it is apparent that

- (1) No one method of meeting the situation has proved to be uncontestedly superior to any other method;
- (2) That the state of social legislation in a nation has direct relation to the size of the population requiring direct relief—which is to say, that elaborate and efficient social legislation tends to reduce the numbers requiring general relief assistance; and
- (3) That no nation has yet shaken its methods of public assistance down into a consistent pattern, but that experimentation in this field is going on the world over.

While all countries aspire to care for unemployed persons through the utilization of funds previously accumulated by them in the form of insurance, no country has escaped the necessity of providing general relief funds. During the year 1935, no spectacular departures from previous patterns of assistance were made, unless it be that there was an increasing emphasis upon the problem of the unemployed young. This problem has been met in various countries by such dissimilar devices as raising the school age (Belgium), enforced service in labor battalions (Germany), and money assistance to students for their continuation in school (U.S.A.).

Studies of the Relief Population. While the United States remains without valid, comprehensive statistics on the unemployed and relief populations, the volume of material based upon exact research is constantly growing. From this material it is clearly apparent that the involuntarily unemployed who fall on relief are distinguishable from the unemployed who do not, chiefly by three characteristics.

1. Their position low on the labor scale—unskilled and semi-skilled workmen;
2. The fact that they receive low wages when employed; and
3. The fact that their family responsibilities—number of children—tend to be too heavy a burden for the income received.

It has also been established that in the United States potent sources of relief recipients are declining industries like cotton textiles and bituminous coal. Other major centres of relief populations are

deteriorating agricultural areas like the Lake States Cut-Over region, the Appalachian-Ozark Region, and the cotton South, where the collapse of the share-cropper system has produced a particularly exasperating relief problem. It is becoming clearer to students of the subject, that while increased production and employment will reduce the relief load in the United States below the 15,000,000 level of September, 1935, there will always be a sizable relief population. It is to this population that Messrs. Roosevelt and Hopkins had reference in their statements quoted above. See UNITED STATES.

1935), 444,072 exclusive of 29,298 (1933 census) aborigines (25,623 full-blood and 3675 half-caste). Perth (capital) with suburbs including Fremantle (25,233 inhabitants) had 213,828 inhabitants (Jan. 1, 1935). During 1934, there were 7801 births, 4076 deaths, and 3682 marriages.

Production. The 1935 agricultural yield was wheat, 26,961,090 bu.; oats, 5,665,000 bu.; barley, 394,000 bu.; hay of all kinds, 420,000 tons; wine (1934), 427,458 gallons; wool (1933), 85,118,808 lb. Livestock in the State (Jan. 1, 1935): 11,191,808 sheep, 912,016 cattle, 161,660 horses, and 98,093

FAMILIES AND PERSONS RECEIVING EMERGENCY RELIEF, CONTINENTAL UNITED STATES

<i>Resident families and persons receiving relief under the general relief and special programmes</i>							
Months	Families	Single persons	Total families and single persons	Total persons	Per cent of total population	Transients (mid-month census)	
1935							
January	4,614,969	850,356	5,465,325	20,654,084	17	297,058	
February	4,584,016	864,316	5,448,332	20,582,090	17	300,460	
March	4,588,356	883,605	5,471,961	20,557,137	17	299,509	
April	4,467,773	882,863	5,350,636	20,024,036	16	293,676	
May	4,304,489	863,305	5,167,794	19,256,720	16	273,824	
June	4,023,972	777,201	4,801,173	17,940,588	15	263,668	
July	3,677,339	695,097	4,372,436	16,127,066	13	253,340	
August	3,477,775	690,991	4,168,766	15,205,722	12	245,266	
September	3,253,590	665,512	3,919,102	14,191,562	12	218,722	

TOTAL OBLIGATIONS INCURRED FOR EMERGENCY RELIEF FROM ALL PUBLIC FUNDS BY STATE AND LOCAL RELIEF ADMINISTRATIONS IN THE CONTINENTAL UNITED STATES

[Source of funds—as reported to the Federal Emergency Relief Administration]

OBLIGATIONS INCURRED FOR EMERGENCY RELIEF							
	Total	Federal funds		State funds		Local funds	
	Amount	Per cent	Amount	Per cent	Amount	Per cent	
1935							
January	196,453,039	151,821,583	77.3	19,038,157	9.7	25,593,299	13.0
February	180,646,483	141,727,948	78.4	16,542,617	9.2	22,375,918	12.4
March	188,431,100	146,366,768	77.7	18,380,721	9.7	23,683,611	12.6
April	188,275,845	142,267,271	75.6	23,647,245	12.5	22,361,329	11.9
May	188,479,057	144,127,204	76.5	19,914,993	10.6	24,436,860	12.9
June ...	169,468,394	130,230,422	76.8	17,717,323	10.5	21,520,649	12.7
July	160,654,882	123,644,843	77.0	15,059,095	9.4	21,950,944	13.6
August	146,671,381	110,554,942	75.4	16,871,130	11.5	19,245,309	13.1
September	120,957,128	88,736,355	73.4	15,737,365	13.0	16,482,408	13.6
Total—9 months, 1935 ...	\$1,540,037,309	\$1,179,477,336	76.6	\$162,908,646	10.6	\$197,651,327	12.8

WELLESLEY COLLEGE. A nonsectarian institution for the higher education of women in Wellesley, Mass., chartered in 1870. The enrollment for the academic year 1935-36 was 1494. The teaching staff numbered 177. The current income for the year 1934-35 was \$1,174,793. The library contained approximately 154,000 volumes. In September, 1935, Pendleton Hall was opened; President, Ellen F. Pendleton, Litt.D.

WELLS COLLEGE. An institution of higher learning for women in Aurora, N. Y., founded in 1868. The enrollment for the autumn of 1935 was 267. The faculty numbered 41 members. The endowment amounted to \$1,515,580, and the income for the year from invested funds, tuition, etc., was \$347,029. There were approximately 78,000 volumes in the library. President, Kerr Duncan Macmillan, S.T.D.

WESLEYAN UNIVERSITY. An institution for the higher education of men in Middletown, Conn., founded in 1831. The 1935 autumn enrollment was 677. The faculty numbered 73. The productive funds of the university for 1935 amounted \$7,100,071, and the income for the year was \$631,867. Gifts amounting to \$2,562,454, mainly from the estate of Charles H. Morse and the Surdan Foundation, were received. The library contained about 196,000 volumes. President, James L. McCaughy, Ph.D.

WESTERN AUSTRALIA. A State of Australia. Area, 975,920 sq. miles; population (Mar. 1,

swine. Dairy production (1933-34): 11,911,912 lb. butter, 285,461 lb. cheese, 4,586,343 lb. bacon and ham. Mineral production (1934) was valued at £5,897,878 including gold £5,534,491; silver and lead, £7199; tin, £6765; coal, £300,000. During 1933-34, from the 1606 factories with 16,163 workers, the value of production was £5,444,280.

Government. For the year ended June 30, 1935, revenue amounted to £9,331,430; expenditure, £9,498,525; public debt, £88,590,176. Executive power was vested in a governor, and legislative power in a legislative council of 30 members and a legislative assembly of 50 members. Governor in 1935 (vacant); Lieutenant-Governor, Sir James Mitchell; Premier, Phillip Collier. See the article on AUSTRALIA.

WESTERN RESERVE UNIVERSITY. A nonsectarian institution for the higher education of men and women in Cleveland, O., chartered in 1826. There were enrolled in the 13 colleges and schools, in the autumn of 1935, 3050 full-time students and 3718 part-time students. The 1935 summer session had an attendance of 1270. The faculty numbered 640, not including 154 scholars, assistants, and fellows. The endowment amounted to \$12,303,108; the income for the year 1934-35 was \$2,022,163. President, Winifred G. Leutner, Ph.D.

WEST VIRGINIA. Population. On Apr. 1, 1930 (Fifteenth Census), 1,729,205; July 1, 1934 (latest Federal estimate), 1,786,000; 1920 (Census), 1,463,701. Charleston, the capital, had (1920),

60,408 inhabitants; Huntington, 75,572; Wheeling, 61,659.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1935	632,000	724,000*	\$ 7,457,000
	1934	635,000	502,000*	8,785,000
Corn	1935	472,000	13,216,000	10,573,000
	1934	441,000	12,128,000	10,673,000
Apples	1935	.....	5,610,000	4,095,000
	1934	.....	3,630,000	3,412,000
Potatoes	1935	34,000	2,924,000	1,901,000
	1934	40,000	3,120,000	2,527,000
Wheat	1935	145,000	2,538,000	2,259,000
	1934	141,000	1,974,000	1,895,000
Oats	1935	87,000	2,044,000	1,083,000
	1934	108,000	2,052,000	1,149,000

* Tons.

Mineral Production. West Virginia retained in 1935 its lead among the States of the Union in the mining of bituminous coal. Its production rose to 98,589,000 net tons, approximately, for 1934, from 98,134,393 tons for 1934. In 1934, 19,231,384 tons of coal from the State were consumed in by-product coke ovens; over 18,600,000 tons thereof, in other States, to which the coal had been shipped. There were used in the State's own byproduct ovens 1,985,711 tons of coal, partly from outside the State; these yielded 1,343,914 net tons of coke; for 1933 the corresponding total was 1,074,002 tons. Beehive coke ovens, of which a considerable number still operated, yielded another 171,518 tons of coke in 1934. Much of the coke made in the State went into the production of pig iron, of which the total quantity shipped by the blast furnaces in 1934 was 445,688 gross tons.

The production of natural gas was held down to 95,000,000 M cu. ft. for 1934, some 2500 of the approximate total of 12,700 wells being shut down for most of the time. Over 63 per cent of the produced gas moved out of the State through pipe lines to supply demand elsewhere. The production of petroleum increased to 4,096,000 barrels (1934) from 3,815,000 (1933).

Education. The number of inhabitants of school age was reckoned, for the academic year 1934-35, as 553,685. The year's enrollments of pupils in the public schools numbered 447,756. Of these, 342,633 were in common schools or elementary grades, and 105,123 were in high schools. The year's expenditures for public-school education throughout the State totaled \$23,392,179. The yearly salaries of teachers averaged \$1073.

Charities and Corrections. The West Virginia Board of Control exercised full, centralized control over the State institutions for the care and custody of persons, under the administrative system in force in 1935. The Board was composed of three appointed members. It held title to the State's institutional properties and supervised a State agency that made purchases for the institutions and for the State's departments and agencies as well. It authorized and paid the State institutions' expenditures.

The State institutions and their respective populations of Nov. 1, 1935, were: for the insane, Weston State Hospital (1585), Spencer State Hospital (829), Huntington State Hospital (854), Lakin State Hospital (colored: 328); for the feeble-minded, West Virginia Training School (81), at St. Mary's; for cases of tuberculosis, Pinecrest Sanatorium (140), and Denmar Sanatorium (colored: 69); for certain other diseases, Berkeley Springs Sanitarium; for general hospital

service, Welch Emergency Hospital (42), and Fairmount Emergency Hospital (51); for penal and correctional custody, West Virginia Penitentiary (2514), Industrial School for Boys (354) at Grafton, Industrial Home for Girls (201) at Salem, Industrial School for Colored Boys (98) at Lakin, and Industrial Home for Colored Girls (30) at Huntington; for dependent children, Children's Home (93) at Elkins and Colored Children's Home (61) at Huntington; West Virginia Home for Aged and Infirm Colored Men and Women (47), at Huntington.

Legislation. The regular session of the Legislature created a tax on personal net incomes, excepting those under \$600 a year as to single persons and \$1300 as to married pairs, excepting also \$200 for each dependent. The imposition of the sales tax on automobiles was abolished; in its stead was created a privilege tax of 2 per cent of the price at which an automobile had been purchased, which tax the acquirer must pay in order to get a certificate of title.

To handle the traffic in alcoholic liquor the Legislature created a State Liquor Commission and gave it authority to conduct State-owned shops and there to sell at retail by the bottle. Beer of the alcoholic strength of not over 5 per cent was alone allowed to be sold prior to the opening of the State shops.

Political and Other Events. The coal industry of the State was variously affected by the Federal Bituminous Coal Act, according to the status of relations with labor unions in the divers fields and companies. Though quite largely dependent on industrial wages for their normal livelihood, the inhabitants of the State fared somewhat better, as to avoiding destitution, than the inhabitants of the country as a whole. For 1934, as was to be noted from the figures reported by the FERA, the cost of public support for the State's destitute unemployed came to \$11 per capita of all the State's inhabitants, whereas the corresponding cost for the whole nation was about \$12; conditions remained much the same until spring, when they began a gradual improvement. The total cost of the public support for the State's unemployed in 1934 was \$19,216,022, of which the FERA furnished 87 per cent and the State almost all the rest.

Officers. The chief officers of the State, serving in 1935, were: Governor, H. G. Kump; Secretary of State, William S. O'Brien; Treasurer, R. E. Talbott; Auditor, Edgar B. Sims; Attorney-General, Homer A. Holt; Commissioner of Agriculture, J. B. McLaughlin; Superintendent of Schools, W. W. Trent.

Judiciary. Supreme Court of Appeals: President, M. O. Litz; Associate Judges, J. H. Hatcher, Jo N. Kenna, Haymond Maxwell, Homer B. Woods.

WEST VIRGINIA UNIVERSITY. An institution for the higher education of men and women maintained by the State of West Virginia at Morgantown, founded in 1867. In the autumn of 1935 the enrollment was 2564. The 1935 summer session had an attendance of 1223. The faculty numbered 212. The library contained more than 150,000 volumes. The total income for 1934-35 from State appropriations and Federal grants was \$2,091,663. New dormitories for men and for women were completed. President, Chauncey Samuel Boucher, Ph.D.

WHEAT. In reviewing the world's wheat situation the U.S. Department of Agriculture reported that towards the close of 1935 the world's sup-

plies for 1935-36, exclusive of China and the Soviet Republics, were estimated at about 4,339,000,000 bu., less by 367,000,000 bu. than the supplies of the preceding commercial season and about 535,000,000 bu. below the average supplies available during the five years 1928-32. Similarly the world wheat stocks at the beginning of the 1935-36 season were about 870,000,000 bu. or approximately 260,000,000 bu. less than a year earlier.

The 1935 production of 42 countries reporting to the International Institute of Agriculture not including China, the Soviet Republics and countries of the southern hemisphere, excepting Australia, was estimated at 1,929,581,000 bu., 2.8 per cent more than in 1934 and 7.7 per cent below the average annual yield for the five years 1930-34. The production of the leading countries exclusive of the United States was reported as follows: India 217,818,000 bu., Italy 170,076,000 bu., France 167,261,000 bu., Germany 103,022,000 bu., Spain 92,367,000 bu., and Australia 81,000,000 bu. The Soviet Republics reported a yield of 690,000,000 bu. in 1934. The 1935-36 crop of Argentina was estimated at 144,035,000 bu., or 96,634,000 bu. below the preceding crop and the smallest since 1916. As the annual exports of Argentina to other South American countries average about 36,000,000 bu. it was thought that only about 26,000,000 bu. would remain for the European market in 1936.

Estimates by the Department of Agriculture placed the 1935 production of all wheat in the United States at 603,199,000 bu., 21 per cent above the very short crop of 426,929,000 bu. in 1934 but 30 per cent below the average of 860,570,000 bu. for the five years 1928-32. The total wheat acreage harvested in 1935 was reported as 49,826,000 acres, compared with 42,249,000 acres in 1934 and 59,885,000 acres, the average for the five-year period. The average yield per acre, 12.1 bu., was only .3 of a bu. above that of 1934 and 2.3 bu. under the average for the five years. The average farm price towards the close of 1935 was 81.6 cents per bu., or 2.7 cents below the average farm price in 1934 and on this basis the total values of the two crops were \$353,688,000 and \$341,916,000 respectively. The yields of the leading States were reported as follows: Kansas 59,951,000 bu., North Dakota 53,772,000 bu., Washington 45,577,000 bu., Ohio 42,406,000 bu., and Nebraska 39,472,000 bu.

The 1935 production of winter wheat was placed at 433,447,000 bu., compared with 405,552,000 bu. in 1934 and 618,186,000 bu., the average for the five-year period. The acreage was 31,000,000 acres and the average yield per acre 14 bu. The production of the leading States was estimated as follows: Kansas 59,887,000 bu., Ohio 42,343,000 bu., Nebraska 36,400,000 bu., Oklahoma 33,080,000 bu., and Washington 30,425,000 bu. The production of all spring wheat including hard red spring, durum and white spring wheats was placed at 169,752,000 bu. produced on 18,826,000 acres at an average yield of 9 bu. per acre. The yields of the leading spring wheat States were recorded as follows: North Dakota 53,772,000 bu., South Dakota 29,242,000 bu., Montana 24,548,000 bu., and Minnesota 17,021,000 bu. The total durum wheat production of 26,777,000 bu., compared with 7,086,000 bu. in 1934, was distributed as follows: North Dakota 17,000,000 bu., South Dakota 8,160,000 bu., Minnesota 1,261,000 bu., and Montana 356,000 bu.

During the fiscal year ended June 30, 1935, the United States exported 3,019,000 bu. of wheat, 2,260,000 bbl. of wheat flour, and 1,738,000 lb. of

wheat products and imported 16,907,000 bu. of wheat including flour.

WHEELER-RAYBURN BILL. See **ELECTRIC LIGHT AND POWER INDUSTRY.**

WHITLEY, THE RT. HON. JOHN HENRY. An English radio executive and former Speaker of the House of Commons, died in London, Feb. 3, 1935. Born in Halifax, Yorks., Feb. 8, 1866, he was educated at Clifton College (1878-84), and at London University. Upon the completion of his education, he entered the business of S. Whitley and Co., cotton spinners of Halifax. Interested in civic improvement, he served on many local committees, and from 1893 to 1900 was a member of the Halifax Town Council. During this period he visited the United States to study surface transportation methods, a subject of great interest to him.

Elected to Parliament as a Liberal from Halifax in 1900, he served in many posts during his 28-year tenure of office. He was Junior Lord of the Treasury (1907-10); deputy chairman of Ways and Means (1910), chairman of Ways and Means and Deputy Speaker (1911-21); and chairman of the Committee on the Relations of Employers and Unemployed, known as the Whitley Commission (1917-18). In 1921 he was elected Speaker of the House, and although at first opposed by the Conservatives, was unanimously elected. His knowledge of the rules and usages of the House stood him in good stead during many turbulent years, and he was known for his tact in handling many trying situations. He was the first Speaker to be engaged in trade, and the first Speaker in many years who, for personal reasons, refused the peerage upon his retirement.

From 1929 to 1931, Mr. Whitley was Chairman of the Royal Commission on Labor in India, and for his work was awarded the Kaisar-i-Hind Medal, 1st class. In 1930 he received the appointment of Chairman of the Board of Governors of the British Broadcasting Company for a five-year term of office. Reluctant at first to accept such a position, he afterward acknowledged his enjoyment and interest in the work. Since May, 1928, he had been president of Clifton College.

WILLIAM AND MARY, COLLEGE OF. An institution for the higher education of men and women at Williamsburg, Va., founded in 1693. The enrollment for the autumn of 1935 was 1156. The 1935 summer session had an attendance of 803 students. The faculty numbered 89 at the college, 13 in the Richmond division, and 14 in the Norfolk division. The gross income for the year 1934-35 was approximately \$950,000. The college recently received a bequest from the estate of the late John Barton Payne which will approximate \$350,000. A new men's dormitory, a new administration building, and a new stadium were completed during the year. President, John Stewart Bryan, A.M., Litt.D., etc.

WILLIAMS, WALTER. An American journalist and college president, died in Columbia, Mo., July 29, 1935. Born in Boonville, Mo., July 2, 1864, he received a common school education, and early learned the printer's trade. By 1884 he was editor and part owner of the Boonville *Advertiser*, which he disposed of in 1889 to become editor of the Columbia (Mo.) *Herald*, a weekly. He remained as editor of this paper until 1908, and during this period he found the time to edit the *St. Louis Presbyterian* (1897-99) and the *Daily State Tribune* of Jefferson City (1894-1902). Also, he established *The Country Editor* (1895), a monthly

for the service of country editors, and maintained it for five years. He was the author of the widely circulated "The Journalist's Creed."

It had long been Mr. Williams' belief that journalists should be given a special training as were doctors and lawyers, and while serving as chairman of the Board of Curators of the University of Missouri (1898-1908), he had frequently voiced this opinion. Finally in 1908, through his efforts, as well as those of the Missouri Press Association, of which he was a founder, the University opened the first School of Journalism in the world. Mr. Williams resigned his outside interests to become professor of the history and principles of journalism, and dean of the School of Journalism. Under his capable administration, the School became one of the foremost in the world. A complete training in all phases of newspaper work is given, and a daily paper published. In the 20 years of the School's existence, more than 1000 have been graduated. From June to December, 1930, Dr. Williams served as acting president of the University, and in 1931 was appointed president, a position he was forced to resign because of failing health on Sept. 10, 1934.

During the course of his career, he received honorary degrees from various colleges, and from 1902 to 1904 he toured the world to interest the foreign press in the Louisiana Purchase Exposition. He served as president for North America of the International Press Congress, Berne (1902); as organizer and secretary of World's Press Parliament, St. Louis (1902); first president, Press Congress of World (1915-25), and subsequently honorary president; president, First Pan-American Congress of Journalists (1926); exchange professor, National University of Mexico (1925); exchange lecturer in Buenos Aires (1930). Also, he was a Fellow of the Kahn Foundation for Foreign Travel of American Teachers (1913-14); a Fellow of the British Institute of Journalists, and in 1932 and 1933 held the Oberlaender Award of study in German speaking countries.

His publications include: *The State of Missouri* (1904); *History of Missouri* (1908); *Missouri Since the Civil War* (1909); *Eloquent Sons of the South* (1909); *From Missouri to the Isle of Mull* (1909); *The Practice of Journalism* (1911); *History of Northeast Missouri* (1914); *History of Northwest Missouri* (1915); *The World's Journalism* (1915); *Journalism—the Newest Weapon for Democracy* (1919); *The Press Congress of the World in Hawaii* (1922); *History of Missouri Since the Civil War* (1927); *The Press Congress of the World in Switzerland* (1927); also, pamphlets on *Some Observations on the German Press* and *The Struggle in Europe for the Freedom of the Press*.

WILLIAMS COLLEGE. A nonsectarian college for men in Williamstown, Mass., founded in 1793. The enrollment for the autumn of 1935 totaled 827. There were 76 members on the faculty. The income for the year ending June 30, 1935, was \$735,173. The number of volumes in the library was about 161,900. President, Tyler Dennett, Ph.D., whose induction occurred on Oct. 5, 1934.

WILLYS, JOHN NORTH. An American manufacturer and ambassador, died at Riverdale-on-Hudson, N. Y., Aug. 26, 1935. Born at Canandaigua, N. Y., Oct. 25, 1873, he was educated in the public schools, and in 1890 began in the bicycle business in Canandaigua. Later he removed to Elmira and organized the Elmira Arms Co., a

sporting goods concern, and subsequently engaged in selling automobiles. He organized the American Motor Sales Co. in 1906, and in the following year acquired the Indianapolis plant of the Overland Automobile Co., and began the manufacture of automobiles. In 1908 he acquired the Pope Toledo plant at Toledo, Ohio, and from that time forward, his business increased. In 1912 he purchased the Gramm Motor Truck Co. of Lima, Ohio, and during the World War, this phase of his business greatly improved through the Government's need for trucks. He was president of the Curtiss Airplane and Motor Co. of Buffalo in 1917, and in the following year purchased the Moline Plow Co., with plants in various Western cities. He established a profit sharing plan with his employees in 1919. During the World War he served as Chairman of the War Camp Community Recreation Fund.

After the War, the Willys Corporation, which was separate from the Willys-Overland Co., suffered reverses and went into receivership, which necessitated the selling of a plant at Trenton, N. J. In 1923, outside interests obtained control of the Willys-Overland Co. in equity receivership from the Willys Holding Co. of Toledo. Mr. Willys and the Company retrenched, and by the end of 1924 all creditors were paid. Two years later, the Whippet, a new type of light car, combining the best features of English and American construction, was put out by the Willys Company. In 1929 the Willys-Overland Co. went into receivership, and Mr. Willys was appointed chairman of the Board as well as co-receiver. He himself sustained no monetary loss at this time because he sold out his financial interest in the Company previous to its failure.

In 1930, he was appointed Ambassador to Poland by President Herbert Hoover, and though successful and well liked by the Polish people, he resigned on Apr. 26, 1932, to reenter the business world. He again assumed the chairmanship of the Willys-Overland Co., and on Jan. 18, 1935, was elected president of the Company by the preferred stock holders.

WILSON, FRANCIS. An American actor, died in New York City, Oct. 7, 1935. Born in Philadelphia, Feb. 7, 1854, he first appeared on the stage in a minstrel show, and his first appearance on the legitimate stage was made at the Chestnut St. Theatre, Philadelphia, in 1877. He played there until 1879 when he made his New York debut at Tony Pastor's. Later he appeared in comic opera, one of his rôles being that of Sir Joseph Porter in *Pinafore*. He joined the McCaull Opera Company as a comedian in 1885, and remained with them until 1889. It was during this period that he created his most famous rôle of Cadeaux in *Erminie*.

Organizing his own company, he opened in *The Oolah* on May 13, 1889, and for the next 15 years appeared in the leading comedy rôles in *The Merry Monarch*; *Erminie* (a revival); *The Chieftain*; *The Devil's Deputy*; *The Little Corporal* (1898-99); a musical version of *Cyrano de Bergerac* (1899-1900); *The Toreador* (1902-03; 04-05). He appeared as David in an all-star revival of *The Rivals* in 1896. His association with Charles Frohman began in 1905 and he appeared in *Cousin Billy* (1905); *The Little Father of the Wilderness* (1905); *When Knights Were Bold* (1907-08), in which he was very successful and toured through 1908-09; *The Bachelor's Baby* (1908-11), also taken on tour; *The Spiritualist* (1911, 1912).

For the next 10 years, Mr. Wilson lectured throughout the country on "The Eugene Field I Knew"; "Humorous Side of an Actor's Life," and "Joseph Jefferson." In 1920 he returned to the stage in *Erminie* with De Wolf Hopper (q.v.), and thereafter played Bob Acres in *The Rivals* (1922); *The School for Scandal* (1923); *She Stoops to Conquer* (1924); *The Rivals* and *Rip Van Winkle* (1925). His last appearance on the stage was in the Players' Club production of *The Little Father of the Wilderness* in 1930.

Actively interested in every phase of his profession, Mr. Wilson was one of the organizers of the Actors Equity Association in 1915, formed to obtain better treatment for the members of the profession, and in the actors' strike of 1918 was a leading spirit. The first president of the organization, he retired in 1921. The work done by him in connection with this Association may well be called his monument. In recent years he had organized a Little Theatre at Clearwater, Fla., where he wintered, and in 1934 it was endowed by Mrs. Edward Bok and called the Francis Wilson Little Theatre.

Besides writing many of the plays in which he appeared, including *The Bachelor's Baby* and *The Spiritualist*, he was the author of *The Eugene Field I Knew* (1898); *Recollections of a Player*; *Joseph Jefferson*; *Francis Wilson's Life of Himself* (1924); *John Wilkes Booth* (1929), and *Edwin Booth*.

WINDWARD ISLANDS. A group of islands in the British West Indies, comprising Grenada, St. Lucia, St. Vincent, and the Grenadines. The seat of the government was at St. George's in Grenada. There was one governor for the three islands but each had its own legislative council. Governor and Commander-in-Chief in 1935, Sir Selwyn Grier. See GRENADA, ST. LUCIA, and ST. VINCENT.

WISCONSIN. Population. On Apr. 1, 1930 (Fifteenth Census), 2,939,006; July 1, 1934 (latest Federal estimate), 3,005,000; 1920 (Census), 2,632,067. Milwaukee (1930) had 578,249 inhabitants; Madison, the capital, 57,899.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) . .	1935	2,687,000	5,182,000*	\$34,719,000
	1934	2,450,000	2,422,000*	42,385,000
Corn	1935	2,312,000	78,608,000	51,095,000
	1934	2,384,000	73,904,000	57,645,000
Oats	1935	2,637,000	85,702,000	25,711,000
	1934	2,334,000	65,352,000	30,715,000
Barley	1935	941,000	25,878,000	14,233,000
	1934	741,000	19,266,000	18,110,000
Potatoes	1935	253,000	20,746,000	10,373,000
	1934	261,000	31,320,000	10,336,000
Wheat	1935	139,000	2,254,000	2,137,000
	1934	108,000	1,647,000	1,596,000
Rye	1935	314,000	4,082,000	1,755,000
	1934	221,000	1,768,000	1,255,000

* Tons.

Education. The number of inhabitants of school age, in the academic year 1934-35, approximated 872,000; it was placed as some 10,000 below the number for the year before. The year's enrollments in the public schools, for which the totals had yet to be exactly determined, were estimated, for the high schools, as some 10 per cent above the 132,463 of the year before; for the elementary grades, as somewhat lower than the previous 419,849. The year's expenditures for public-school education again approximated \$42,000,000. The minimum of \$75 a month, which had formerly

applied to teachers' salaries but had been reduced, was restored.

Charities and Corrections. The State's central administrative authority over institutional care and custody of persons, under the laws in force in 1935, was the State Board of Control. It was composed of three members. In its charge were 18 State institutions, containing on October 31 an aggregate of 8415 inmates. These institutions and their respective populations of that date were: Mendota State Hospital (870), at Mendota; Winnebago State Hospital (775), at Winnebago; Central State Hospital (278), Waupun; Memorial Hospital (84), at Mendota; Northern Colony and Training School (1535), Chippewa Falls; Southern Wisconsin Colony and Training School (759), Union Grove; State Sanatorium (206), at State-san; Lake Tomahawk State Camp (39), Lake Tomahawk; State Prison (1727), Waupun; State Reformatory (465), Green Bay; Industrial Home for Women (77), Taycheedah; a prison for women, included in the Industrial Home, but having a separate population of 53; Industrial School for Boys (382), Waukesha; Industrial School for Girls (192), Milwaukee; State Public School (508), Sparta; School for the Deaf (226), Delavan; School for the Blind (147), Janesville; Workshop for the Blind (92), Milwaukee. Persons at liberty under parole from State institutions numbered 3718.

Legislation. The duration of the regular legislative session was protracted to 262 days. Its length was in some degree attributable to the consideration of the question whether to adopt Governor La Follette's recommendation of a programme of \$209,000,000 of State expenditure of the "work-relief" type, to be financed mainly with Federal loans and gifts. La Follette's political organization stirred up much popular fervor for the plan, which many alarmed taxpayers none the less opposed. It encountered strong opposition in the upper house of the Legislature as well, and was defeated by combined Republicans and Democrats.

A budget bill carrying appropriations of \$50,197,074 for the ensuing two years was passed; it increased the appropriations for the State's system of pensions to the elderly, for aid to mothers, and toward the support of public schools. Legislation was passed to improve the condition of employees in penal and charitable institutions. A maximum working day of eight hours was prescribed for such institutions. The Governor withheld his signature from a measure which had been passed, imposing an "excess-profits" tax on incomes, relatively small ones included, with a view to producing \$1,000,000 a year for State aid to high schools. Among many minor laws, one required hotels and restaurants to serve cheese with every meal.

Political and Other Events. Governor La Follette's campaign for the Legislative adoption of his scheme for the expenditure of \$209,000,000 on public works in the State was one of the striking occurrences of the year. The plan involved the creation of a Wisconsin Finance Authority, authorized to engage in many forms of business and to use a fund of \$100,000,000 to be obtained from the Federal Government, as well as great sums to come through the application of new taxes. This body was also to have had the power to issue notes, in denominations as low as \$1, redeemable in State banks. While nominally an independent body, it would have been under the virtual domination of the Governor.

The State's act to provide conformity with the

NRA was invalidated on March 5 by the State Supreme Court as making an unconstitutional delegation of legislative authority in giving industries power to make compulsory codes for the government of their members. The State's law for the establishment of pensions to the elderly needy inhabitants, which had been enacted some 10 years before, became compulsory for all the counties on July 1. It had previously been optional with the several counties, any of which might adopt it by vote of the county board. In 1931 the law had been amended to render the plan compulsory for all counties after July 1, 1935.

The University of Wisconsin was attacked in a report rendered on September 21 by an investigating committee of the State Senate, which charged it with encouraging Communistic teachings and making avowed Communists welcome. Dr. Glenn Frank, president of the University, was specifically mentioned as understood by "a large group" to have encouraged communistic meetings and ideas.

After protracted litigation a court granted in October, 1934, permission sought at the instance of the Izaak Walton League, to flood the 40,000-acre area of the old Horicon Marsh on the Rock River. This marsh, once a great breeding ground for ducks, had been drained some 30 years before, by a land company which later failed. After the issue of the court order a dam was built to flood the area, and ducks were released there in May.

Officers. The chief officers of the State, serving in 1935, were: Governor, Philip F. La Follette; Lieutenant-Governor, Thomas J. O'Malley; Secretary of State, Theodore Dammann; Treasurer, Robert K. Henry; Attorney-General, James E. Finnegan; State Superintendent of Schools, John Callahan.

Judiciary. Supreme Court: Chief Justice, Marvin B. Rosenberry; Justices, Chester A. Fowler, Oscar M. Fritz, Edward T. Fairchild, John D. Wickhem, George B. Nelson, Joseph Martin.

WISCONSIN, THE UNIVERSITY OF. A State institution of higher education in Madison, founded in 1848. The enrollment for the autumn term of 1935 was 9065, distributed as follows: Letters and science, 5437; engineering, 1058; agriculture (including home economics), 1022; education, 650; law, 409; medicine, 306; nursing, 144; and library school, 39. In the 1935 summer session the enrollment was 4212. The faculty numbered 1464. The endowment as of June 30, 1935, was \$1,409,098, while the net income for 1934-35 was \$6,765,227. Gifts received during the year were valued at \$352,765. The library contained 966,000 volumes and 460,000 pamphlets. President, Glenn Frank, M.A., Litt.D., L.H.D., LL.D.

WISCONSIN ACT. See UNEMPLOYMENT.

WITHERSPOON, WITH'er-spōon, HERBERT. An American basso, died in New York City, May 10, 1935. Born in Buffalo, N. Y., July 21, 1873, he graduated from Yale University in 1895, and later studied drawing and painting at the Yale Art School. His musical education was obtained in New York, London, Paris, and Berlin, under Horatio Parker, MacDowell, Treumann, Hall, Dubulle, Lamperti, and Henry J. Wood. He also studied acting with V. Capoul and Anton Fuchs in Munich.

His début was made in New Haven in 1895 as soloist with the Yale Glee Club, and in the following year he appeared as soloist with the New York Symphony Orchestra in a performance of *Parsifal*. From 1898 to 1900 he appeared in English grand opera under Henry W. Savage and his Castle

Square Opera Co., and first appeared as Ramfis in *Aida*. For many years he toured with the Thomas Orchestra and the Pittsburgh Orchestra.

In 1908, Mr. Witherspoon made his début with the Metropolitan Opera Company, New York, singing the off-stage music of Titirel in *Parsifal*. For eight years he remained with the Company, appearing in various Wagnerian rôles, including King Henry in *Lohengrin*, King Marke in *Tristan und Isolde*, Landgrave in *Tannhauser*, and Gurnemanz in *Parsifal*. He also sang Sarastro in *The Magic Flute*, and created the part of Arth in the world première of Parker's *Mona*, Nov. 14, 1912.

After leaving the Metropolitan, he devoted his time to concert work and teaching. He toured with the Chicago, Pittsburgh, Boston, and New York Symphony Orchestras, the New York Oratorio Society, the Mendelssohn Choir of Toronto; and appeared in festivals at Cincinnati, Worcester, Mass., Sheffield, Norfolk, and Norwich, England, and with the London Symphony and Queens' Hall Orchestras.

In 1925 he became president of the Chicago Musical College, which position he held until 1929, and during 1926 and 1927 he lectured on "Music as a Vital Factor in General Education." Appointed vice president and director of the Chicago Civic Opera Company, he held this position until the fall of the Insull interests in 1931, and the abandonment of plans for the future of the Opera Company. For a year, 1932-33, he was director of the Cincinnati Conservatory of Music, but in September, 1934, returned to New York to reopen his vocal studio. Early in 1935 he joined the faculty of the Juilliard Summer School, and in March announcement was made of his appointment as general manager of the Metropolitan Opera Company to succeed Giulio Gatti-Casazza. Although his connection with the Metropolitan as general manager was of short duration, he had made extensive plans and had tentatively engaged many new voices for the forthcoming operatic season. See MUSIC.

In 1922, Mr. Witherspoon was instrumental in the founding of the American Academy of Teachers of Singing, and until 1926 was its chairman. Also, he served as chairman of music at the Century of Progress Exposition in Chicago in 1933. His voice, which was rich and smooth, he used intelligently, and although not a remarkable or a brilliant artist, his work was dependable and agreeable.

WOMAN'S CHRISTIAN TEMPERANCE UNION, NATIONAL. An all-partisan and all-sectarian movement which has as its purpose the protection of the home through the abolition of the liquor traffic. It is comprised of 10,000 local unions with an approximate membership of 600,000, and is organized in every State, territory, and dependency of the United States. At the convention held in Atlantic City, New Jersey, Sept. 6-12, 1935, Mrs. Ida B. Wise Smith was reelected president and Mrs. Anna Marden De Yo, corresponding secretary. Great interest was manifested in the progress of the Five-year, Five-point Programme, majoring in alcohol education, to culminate in the observance of the Centenary celebration of the birth of Frances E. Willard in 1939. The organization maintains a legislative headquarters at 100 Maryland Ave., N.E., Washington, D. C. National headquarters are at 1730 Chicago Ave., Evanston, Ill.

WOMEN IN INDUSTRY. The codes established by the NRA did not, by and large, recognize the principle of equal pay for equal work, but continued to observe the traditional differential in

wages as between men and women, lower wages for women being characteristic. In April, 1930, 10,752,116 women told the census enumerators that they ordinarily worked for wages. This was a large increase over the number so reported in 1920. The depression came at a time when the rise in the number of working women had outstripped the growth of the female population in the United States. Women were chiefly employed, in 1930, in domestic service, clerical occupations, manufacturing, and mechanical industries, and professional service (60 per cent school teachers), the foregoing classification accounting for four-fifths of all women employed. Over half of the women do unskilled or semi-skilled work and the greater majority earn \$12 a week or less. Many of the occupations traditionally followed by women have been over-crowded for some time, including nursing, and secretarial and general office work. The limitation on opportunities for women seeking work was intensified by the depression. Their position was also made more difficult by the fact that when minimum wages were established in certain industries under the NRA, it ceased to be profitable to employ women workers in preference to men.

With the collapse of the NRA this competitive disadvantage was destroyed. Studies of wages earned made by the Women's Bureau, of the Department of Labor, from 1920 to 1934 yielded wage figures for about 180,000 women, almost all white, in 17 states. These figures indicate that the medians of the wage earnings—half of the women receiving more and half receiving less—were as follows: Under \$9, Alabama (1922) and Mississippi (1924); \$9 and under \$11, Kentucky (1921), South Carolina (1921), and Texas (1932); \$11 and under \$13, Arkansas (1922), (1932-33), Delaware (1924), Georgia (1920-21), Kansas (1920), Michigan (1934), Ohio (1922), Tennessee (1925); \$13 and under \$15, New Jersey (1922), Ohio (1922), and Oklahoma (1924); \$15 and under \$17, Florida (1928) and Rhode Island (1920).

Said the Women's Bureau report: "The responsibilities of the wage-earning woman and her contribution to the support of others, mother, father, sisters, brothers, husband, children, have not yet received full recognition from industry and the public." This statement clearly indicates the fact that the difficult competitive position of women in the modern industrial world will have profound influence on the general living standards of thousands of working class families in the next few years. With the removal of the bottom from the wage scales in the industries where the NRA prescribed minimum pay, it is likely that women will once more begin to replace men. On the other hand, there is evidence assembled by the Women's Bureau that shows a trend in the opposite direction in proportion as the number of unemployed men increases. Whichever tendency triumphs, according to the experts, the total effect is to reduce wages in the competitive occupations. Some indication of the effect of men and women competing is derivable from a study released by the Women's Bureau which states that "men working on punch presses get 45¢ an hour, women 25¢; on core making with the same size cores the men's rate was 52¢, the women's 35¢; on rivet the men get 60¢, the women 41¢." Another recent publication of the Women's Bureau entitled *Women and Work in Offices* reported that the medium earnings in this field were \$24.60, ranging from \$19.85 for cashiers or tellers to \$28.65 for secretaries. This is, of course, one of the fields in which women workers are found in large numbers.

In this field, also, the effect of mechanization is found, and it has been established by the Women's Bureau that shift from traditional to mechanized methods in, for example, the field of bookkeeping, has resulted in the lowering of earnings.

The women workers are also profoundly affected by industrial home work which was but partially outlawed by the NRA and which, according to studies lately released, has increased in volume since the collapse of the NRA. In a pamphlet entitled *The Commercialization of the Home Through Industrial Home Work* published by the Women's Bureau, it is pointed out that low priced home work tends to lower factory wages; that many families on the public relief rolls are found doing such work at home; that unemployment in the household tends to lead the homemakers to engage in such work; and that the difficulty experienced by married and unmarried women in finding employment in normal channels, leads them to resort to this type of labor. Under this system of production such products as artificial flowers, baseballs, dolls' dresses, fishing tackle, flags, greeting cards, lamp shades, domestic decorative linens, powder puffs, tobacco bags, cotton garments, lace, candlewick bedspreads, and art and needle work are produced. It is estimated that such work goes on in at least 77,000 homes scattered over 48 States (1930). While some types of home work have increased in recent years others have declined.

A special study of southern mountaineer handicrafts, which fall under the classification of home work, reveals that under the existing system of production control and distribution of work "it has not yielded over an average of a dollar a week per craftswoman and it has not guarded against working conditions that menace the health of the handicraft family." This situation is especially shocking when it is known that the market for the handicrafts is found chiefly among "the middle and upper income class" of the nation. The retail stores catering to the \$2000 and lower income classes carry imported handmade articles, but southern mountaineers, at a minimum of 30¢ an hour, could not offer goods in competition with these products. Therefore, while handicrafts in the southern mountains do not contribute to the economic well-being of the residents, they are to-day chiefly supported by the well-to-do in the nation at large.

Turning to the situation in Rhode Island, where one of the chief products of home work is lace, a special study leads to the conclusion that "practically three-fifths of the households had earnings for the previous week of less than \$6 and only about one-fourth had earned from \$6 to \$12." A Women's Bureau study entitled *Employment of Women in the Sewing Trade in Connecticut* reports that in the latter part of 1931 and the early part of 1932 women working in the necktie and cravat industry report medium earnings of \$16.15 while in the men's shirt industry the medium earnings were \$9.65. Analysis showed that one-third of the women in the sewing industry earned less than \$10 a week and that 513 women who were able to report, had medium earnings for a full year's labor of \$670. These earnings were for an average of 48 hours per week.

WOMEN'S CLUBS, GENERAL FEDERATION OF. An organization founded in 1889 for "the promotion of movements looking toward the betterment of life." In 1935 it was composed of approximately 14,500 clubs in the United States, having also a membership of 40,000 Juniors, and 84 clubs outside the mainland of the United States; affiliated

with it were 16 national and international organizations. The official publication is *The Clubwoman GFWC*. At the June, 1935, convention in Detroit, Mich., Mrs. Roberta Campbell Lawson was elected president for the ensuing triennial period. Headquarters are at 1734 N St., N. W., Washington, D. C.

WOODROW WILSON AWARD. See INTERNATIONALISM.

WOOL. Conditions in the wool textile industry of the United States and most foreign countries showed marked improvement in 1935 as compared with 1934. Wool prices improved steadily throughout much of the year with increased consumption stimulated by government contracts.

Preliminary estimates of the U. S. Bureau of Agricultural Economics indicated a total reduction of about 3 per cent in the wool production of most all of the more important producing countries. The five countries (Australia, New Zealand, Union of South Africa, Uruguay, and Argentina) furnish about 90 per cent of the world's wool exports. Wool production in these five countries was estimated at 1,899,000,000 lb., a decrease of about 4 per cent as compared with 1934. Wool carry-over was about 13 per cent smaller than in 1934. Production in 24 Northern and Southern Hemisphere countries furnishing about two-thirds of the world total supply outside of China and Russia was estimated at 2,751,000,000 lb., or 3 per cent less than in 1934.

Wool consumption in the United States increased especially during the latter part of the year. During 1935 domestic mill consumption of apparel wool totaled 303,893,000 lb. as compared with 167,600,000 lb during 1934.

The world's import trade in raw wool closely followed wool production in recent years, but there were important changes in the trade of individual countries. Imports of carpet wools into the United States during 1935, of 171,504,101 lb., doubled those of 1934. A downward trend in imports into France, Germany, and Belgium was offset by increased imports into the United Kingdom, Italy, and Japan.

The following articles relate to wool production and utilization: *Handling the Wool Clip*, by L. J. Horlacher (Ky. Ext. Circ., 72, 1935); *Wool Yield and Fleece Density Can be Measured by a Simplified Method*, by J. I. Hardy (U. S. Dept. Agr. Yearbook, 1934, pp. 378-80); *Studies of Wool and Other Fibers* (U. S. Dept. Agr., Bur. Anim. Indus. Rpt., 1934, p. 11); *The Influence of Various Kinds of Wool on Some of the Physical Properties of Flannel*, by E. Pierson (South Dakota Rpt., 1934, pp. 35-38); *The Tariff on Wool*, by H. R. Mohat (Tariff Res. Com., Agr. Tariff Ser. No. 5, Madison, Wis., 1935); *A Practical Laboratory Method of Making Thin Cross Sections of Fibers*, by J. I. Hardy (U. S. Dept. Agr. Circ., 378, 1935).

WORCESTER POLYTECHNIC INSTITUTE. A nonsectarian institution for the technical education of men in Worcester, Mass., founded in 1865. The enrollment for the fall semester of 1935 totaled 579. The faculty numbered 66. The productive funds amounted to \$3,425,634, and the income for the year was \$343,966. There were about 24,000 volumes in the library. President, Ralph Earle, D.Sc., D.Eng., LL.D., Rear Admiral, U.S.N., ret.

WORKMEN'S COMPENSATION. Accidents. The place of accidents in modern America was brought vividly to the fore at a conference called in Washington on Dec. 18, 1935, by Secretary of Commerce Roper. At that time it was brought out that no comprehensive and reliable statistics on the subject are available, but that a

tentative estimate is that 101,000 persons are killed in accidents each year, and 9,000,000 are injured. In order of the toll exacted, accidents take place on the highway (motor vehicle accidents), at home, in public places, and at work. In opening the conference Mr. Roper stated:

The national accident situation truly is an astonishing one. It is almost inconceivable that a condition could exist where so many lives were being lost, so little information about the real causes of these fatalities being gained and so little effort being made to prevent these tragic deaths and injuries.

In an effort to meet the situation, a comprehensive plan of study is to be worked out by a group of committees which will deal with the separate aspects of the problem. The committees and their chairmen were as follows:

Causes and Remedies—Henry H. Heimann, Niles, Mich.
Rural and Home Accidents—Senator Arthur Capper, Topeka, Kan.
Urban Street Safety—Thomas J. Watson, New York City.
Cooperation With Common Carriers—W. Averell Harrison, New York City.
Cooperation With the Automotive Industry—John L. Lovett, Detroit.
Uniform Traffic Regulations—Representative Emmet O'Neal, Louisville.
Driver Training and Law Enforcement—Dr. B. L. Corbett, Milwaukee.
Education—Barron G. Collier, New York City.
Cooperation With Safety Groups—Fred M. Rosseland, Newark.
Safety in the Air—Senator W. G. McAdoo, Los Angeles.
Safety at Sea—Walter Parker, New Orleans.

Accidents in Industry. Turning to the general problem of accidents in industry, a study made by the Public Health Service in 10 States revealed that the highest accident rate was to be found among unskilled laborers and the lowest among professional men. When these figures were considered in relation to the death rates of the different occupational groups, it was discovered that while unskilled laborers still had the highest rate, the lowest was to be found among agricultural laborers, the professional men being, however, below the "all class" average of 8.7 deaths per 1000 population. Consideration of specific diseases showed that the unskilled workers are especially subject to death from tuberculosis and pneumonia. These points are made clear in Tables I and II.

TABLE I

Occupation	Deaths per 1,000 population
Agricultural workers	6.2
Professional men	7.0
Proprietors, managers, and officials	7.4
Clerks and kindred workers	7.4
Skilled workers and foremen	8.1
Semi-skilled workers	9.9
Unskilled workers	13.1
All classes	8.7

TABLE II

Occupation	Deaths per 1,000 population		
	Tuberculosis	Pneumonia	Accidents
Agricultural workers	46.5	43.4	15.1
Professional men	26.2	38.8	14.5
Proprietors, managers, and officials	43.2	53.0	22.3
Clerks and kindred workers	65.8	50.5	18.7
Skilled workers and foremen	72.1	59.7	34.2
Semi-skilled workers	102.1	71.6	34.1
Unskilled workers	184.9	135.9	51.7
All classes	87.5	69.3	29.5

A conference of the International Association of Industrial Accident Boards and Commissions was held at Asheville, North Carolina, beginning Sept. 30, 1935, and continuing for four days. A wide range of topics was discussed, including types of

legislation already enacted, safety codes, rehabilitation after injury, medical problems, and costs, as well as industrial diseases, including lead poisoning, the determination of permanent disability, and accident prevention in general, a subject of especial interest to the Roper conference which met six weeks later. The conference was marked by the attendance of representatives of the new industrial commissions of Florida and South Carolina. The former State established a system of workmen's compensation which became effective on July 1, 1935, and which is to be administered by a commission of three members. The act covers non-elective public employees, all employees of public and quasi-public corporations, and all private industries having three or more employees. Exempted were workers in domestic service, agricultural and horticultural farm laborers, and workers in tractor and other sawmills with less than 10 employees. An employer must insure his risk either in a stock or mutual insurance company, or provide self insurance. Under the South Carolina act, which became effective on Sept. 1, 1935, all public employment other than elective officers, and all private employment in which there are 15 or more employees, are covered. Exempt are railroads, domestic service, sawmills, agriculture, steam laundries, rock quarries, sand mines, oil mills, logging operations, and Federal employees. An employer must insure his risk in an insurance company or furnish proof of his financial ability to satisfy his obligations under the act. There are now but two States which do not offer protection to workers in industry, Arkansas and Mississippi.

The rise in volume of employment has been accompanied by a rise in fatal accidental injuries arising out of or in the course of employment. This is illustrated by a report of the Metropolitan Life Insurance Company covering the situation for 1934. Basing the figures on the holders of policies in this company, it was discovered that there was an increase of 11.3 per cent over 1933. All causes but two showed marked rises, ranging from 11.1 in the case of steam-railroad accidents, to 100 in the case of street railways. The two causes showing a contrary trend were accidental burns which declined 30.8 per cent and traumatism in mines and quarries which declined 25 per cent. (See Table III.)

Workmen's Compensation. A number of interesting decisions in workmen's compensation cases were rendered during the period. A selection follows: (a) the Supreme Court of Colorado held that the murder of an employee on duty was a compensable accident; (b) the Supreme Court of Ohio held an injury suffered during a labor dispute was compensable; (c) the U.S. Supreme Court held

that an employee hired in one State for employment outside the State, and injured in the course of work, is compensable; (d) the Supreme Court of Tennessee held that the death of an employee killed while driving at excessive speed was a compensable accident; and (e) the Supreme Court of the United States denied that a seaman was entitled to extra compensation because of alleged violation of established working conditions on the part of the employer. See **INSURANCE**.

Recent figures on industrial accidents in Canada, and on industrial accidents and illness in the Soviet Union are presented in accompanying Tables IV and V.

TABLE IV—FATAL INDUSTRIAL ACCIDENTS IN CANADA, 1933 AND 1934

Industry	1934		1933 *	
	Num-ber	Per cent of total	Num-ber	Per cent of total
All industries	974	100.00	808	100.00
Agriculture	150	15.40	111	13.74
Logging	113	11.60	91	11.26
Fishing and trapping ..	45	4.62	36	4.45
Mining, nonferrous smel- ing, and quarrying	142	14.58	112	13.86
Manufacturing	98	10.06	103	12.75
Construction	114	11.71	65	8.04
Electric light and power	20	2.05	15	1.86
Transportation and public utilities	162	16.63	161	19.93
Trade	48	4.93	48	5.94
Finance .....	...	...	3	.37
Service	82	8.42	63	7.80

* Revised figures.

TABLE V—INDUSTRIAL ACCIDENTS AND TEMPORARY DISABLEMENT IN THE SOVIET UNION IN 1932

Branch of industry	Number of accidents per 1,000 insured workers or 300,000 man-days worked	Number of temporary disabilities per 100 insured workers	Number of days of disability per 100 insured workers
Coal mining	282.3	95.5	1,064
Ore mining (iron and manganese)	223.7	100.5	940
Metallurgy	209.4	95.0	972
Machine building	180.1	121.3	1,055
Electrical equipment ..	127.2	120.8	1,034
Basic chemicals	157.9	89.9	880
Rubber industry	78.6	114.2	1,078
Match industry	184.5	122.6	1,021
Sawmills and plywood ..	186.3	114.1	1,074
Textile industry	55.4	106.1	885
Clothing industry	57.1	135.6	1,004
Leather industry	146.7	134.1	1,040
Boot and shoe industry ..	111.1	134.0	1,026

WORK RELIEF. See UNITED STATES under Congress.

TABLE III—DEATH RATES FROM OCCUPATIONAL ACCIDENTS AMONG INDUSTRIAL POLICY-HOLDERS OF METROPOLITAN LIFE INSURANCE CO., 1929 TO 1934

Cause of injury	Death rates per 100,000 white male policy-holders, aged 15 and over						Per cent of change, 1933 to 1934
	1929	1930	1931	1932	1933	1934	
All occupational accidents	35.9	31.0	27.2	22.9	21.2	23.6	+ 11.3
Accidental burns (conflagration excepted)	1.1	1.7	1.0	1.0	1.3	.9	- 30.8
Accidental absorption of irrespirable gases .....	.5	.3	.4	.4	.4	.5	+ 25.0
Accidental drowning	1.7	1.5	1.3	1.0	.7	1.0	+ 42.9
Traumatism by fall	5.1	5.4	4.8	3.9	3.1	3.7	+ 19.4
Traumatism in mines and quarries	4.7	3.5	3.0	2.7	2.8	2.1	- 25.0
Traumatism by machines	4.5	3.5	3.0	2.4	2.2	2.6	+ 18.2
Steam-railroad accidents	4.9	2.6	1.9	1.6	1.8	2.0	+ 11.1
Street-railway accidents	3	.4	.5	.3	.2	.4	+ 100.0
Automobile accidents *	3.8	3.8	4.6	3.6	3.7	4.5	+ 21.6
Electricity (lightning excepted)	2.4	1.9	1.5	.9	.5	.8	+ 60.0
Miscellaneous	6.9	6.4	5.2	5.1	4.5	5.1	+ 13.3

* Exclusive of deaths in collisions between automobiles and railroad trains or engines, and between automobiles and street cars.

WORKS PROGRESS ADMINISTRATION (WPA). See WELFARE WORK; UNITED STATES under *Administration*.

WORLD COURT. The World Court is at present composed of 15 judges and 4 deputy judges, and ordinarily sits as a full court. The number of judges normally required to constitute the full court is 11. This number may, if necessary, be made up by calling upon the deputy judges. If it is impossible to obtain the presence of 11 judges, the Court may sit with 10 or 9 members. The ordinary session of the Court opens on February 1 of each year. Extraordinary sessions are summoned, whenever desirable, for instance, when a case submitted to the Court is ready for hearing and adjudication.

The Court has jurisdiction to deal with disputes in two different sets of circumstances: 1. The jurisdiction is said to be voluntary where two States by a special agreement submit a certain dispute to the Court for judgment. 2. The jurisdiction is said to be compulsory, that is, a State can summon another State to appear before the Court with or without its consent.

The Court has jurisdiction over the interpretation of a treaty; any question of international law; over legal disputes concerning the existence of any fact which, if established, would constitute a breach of an international obligation; over the nature or extent of the reparation to be made for the breach of an international obligation.

Compulsory jurisdiction of the Court extends over a large field, including treaties of arbitration, any dispute arising out of the interpretation and application of any of the Articles dealing with ports, waterways, and matters of transportation; disputes relating to the Kiel Canal; disputes arising between Czechoslovakia and Austria over the telegraphic and telephonic systems of those countries; and over certain numbers of international agreements concerning special rivers.

Forty-nine states have ratified the Statute of 1920 under which the Court was organized. The various protocols adopted since 1920 have been ratified by a varying number. On Dec. 31, 1934, 41 states had ratified the protocol adopted to meet the views of the United States of America, but on January 29, by a vote of 52 in favor to 36 against (a two thirds majority being necessary), the Senate decided not to adhere to this international tribunal which sits in the Peace Palace at The Hague.

Presidents of the United States have advocated a World Court of some kind since 1899. Presidents Harding, Coolidge, and Hoover, advocated this specific World Court. President Roosevelt urged our adherence to it in a message to Congress in December, 1934, declaring that "the United States has an opportunity once more to throw its weight into the scale in favor of peace."

The Hearst press, it was generally agreed, had something to do with this latest rebellion. Before the vote on the Court was taken it thundered: "The way to keep America out of the League of Nations trap—and the only way—is to keep America out of the League Court! Telegraph your Senators at Washington today, and tell them this!" Quite as effective was a Sunday afternoon radio sermon delivered by the Rev. Charles E. Coughlin of Detroit. An analysis of the vote showed that on the basis of 1932 election figures they represented 28,306,300 voters, or 60.8 per cent, and 75,769,580, or 63.1 per cent of the total population (1930 census). The 36 Senators who voted against the

World Court represented 18,272,210 or 39.2 per cent of the 1932 popular vote, and 44,335,715, or 36.9 per cent of the population. This action of the Senate means delay, but not necessarily final defeat.

Prof. Manley O. Hudson was nominated by the American group to succeed Frank B. Kellogg as judge on the World Court. This, according to general practice, virtually assured his election by the League Assembly next fall. Judge Kellogg resigned in September because his health was not such as to make advisable the frequent trips across the Atlantic required by service on the Court. He had been a judge at The Hague for five years.

World Court judges do not represent the nations of which they are citizens, but are chosen because of their qualifications as international jurists. It has, however, been the practice to select a man of the essential background and qualities, when he is available, of the same nationality as the judge whose place is to be filled. On September 14th the Assembly and Council of the League of Nations elected Haruichi Nagaoka of Japan as a member of the Court to fill the seat left vacant by the death of Mineichiro Adachi.

The thirty-fourth (ordinary) session of the Court, which opened on Feb. 1, 1935, ended on April 10th. At a public sitting held on April 6th, the Court delivered an advisory opinion upon a question submitted to it by the Council of the League of Nations in January, 1935, and relating to the situation of minority schools in Albania. This question was as follows:

Whether, regard being had to the above-mentioned Declaration of Oct. 2, 1921, as a whole, the Albanian Government is justified in its plea that, as the abolition of the private schools in Albania constitutes a general measure applicable to the majority as well as to the minority, it is in conformity with the letter and the spirit of the stipulations laid down in Article 5, first paragraph, of that Declaration.

The Court answered the question in the negative by eight votes (M. Guerrero, Vice-President, Baron Rolin Jaquemyns, M. Fromageot, M. Altamira, M. Anzilotti, M. Urrutia, M. Schucking, Jonkheer van Eysinga) to three (Sir Cecil Hurst, President, Count Rostworowski, M. Negulesco). The three judges composing the minority attached to the Opinion a joint dissenting opinion.

The origin of the question and the reasoning of the Court may be briefly summarized as follows:

Albania was admitted to membership of the League of Nations in 1920, on the understanding that with regard to the protection of minorities in her territory she should assume obligations in accordance with the general principles laid down in the Minorities Treaties. Albania's undertaking was given in the form of a Declaration which she signed on Oct. 2, 1921, and which was officially transmitted to the Council. The clauses of the Declaration, although, generally speaking, they follow the corresponding clauses of the Minorities Treaties, differ from them in some respects.

Under the Declaration, Albania had to furnish the Council with information concerning the legal status of minorities. It appears from the information supplied that the latter had the right to maintain and establish private schools.

In 1923, the Albanian Government manifested the intention of abolishing the right to maintain and establish private schools; but this right was preserved in the Constitution of 1928. In 1930, however, Albania took steps with a view to the secularization of education, and, in 1933, the abolition of private schools was completed by means of an amendment to the Albanian Constitution.

Following upon these events, petitions were addressed to the League of Nations on behalf of the minorities; in accordance with the procedure in force, they were referred to a Committee of three members, who decided to have the question of the scope of the Albanian Declaration concerning minorities, in regard to certain points, placed on the

Council agenda. The Council then decided to consult the Court.

In its opinion, the Court observes that the two opposing standpoints are as follows: On the one hand, that the Declaration imposed on Albania no other obligation in educational matters than to grant to members of minorities a right equal to that possessed by other Albanian nationals; on the other hand, that the fundamental idea of the Declaration is to guarantee to members of minorities freedom of education by granting them the right to retain existing schools and to establish others. According to the first standpoint, any interpretation which would compel Albania to respect the minority schools, though other Albanian nationals were no longer entitled to have private schools, would create a privilege in favor of the minority and thus run counter to the essential idea of the law governing minorities; according to the other standpoint, equality of treatment cannot impede the purpose of the Albanian declaration which is to ensure full and effective liberty in matters of education.

In presence of these two conflicting contentions, the Court in construing the declaration adopted the point of view of the general principles laid down in the minorities treaties.

In this connection, it observes that the idea underlying the treaties is to ensure that the majority and minorities may "live peaceably" side by side and "cooperate amicably," whilst preserving the characteristics of the latter. In order to attain this object, they lay down the principles of equality and of granting minorities means for the preservation of their traditions and characteristics. The two principles are moreover interlocked, for there would be no true equality between a majority and a minority if the latter were deprived of its own institutions and were consequently compelled to renounce that which constitutes the very essence of its being as a minority.

The Court next observes that the Albanian declaration is also inspired by these principles: besides providing for equality of treatment, it specifies the rights that are to be enjoyed equally by all persons whom it covers, including particularly members of minorities.

To the latter the declaration ensures "the same treatment and security in law and in fact" as other Albanian nationals. The Court holds that this is a notion of equality which is peculiar to the relations between a majority and a minority, and the characteristic feature of which is equality *in fact*. Equality in fact supplements equality in law; it excludes a purely formal equality and may involve the necessity of different treatment in order to establish an equilibrium between different situations.

In the Court's view, this is precisely what the declaration does when it provides that minorities are to have the right to maintain and establish institutions such as schools. The requisite equality of treatment would be destroyed if these institutions were abolished or replaced by State institutions.

In this connection, the Court also observes that the expression *equal right* means that the right thus conferred on members of the minority cannot in any case be inferior to the corresponding right of other Albanian nationals: it is the minimum necessary to guarantee effective and genuine equality as between the majority and the minority. Far from creating a privilege in favor of the minority, it ensures that the majority shall not be given a privileged situation as compared with the minority. The Court finds, moreover, that the view taken by it is confirmed by the history of the relevant provisions and by their context.

On Dec. 4, 1935, the Court delivered the Advisory Opinion for which it had been asked by the Council of the League of Nations on the question whether two decrees issued by the Senate of Danzig on Sept. 5, 1935, and amending the criminal law and procedure of the Free City were "consistent with the Constitution of Danzig, or, on the contrary, violate any of the provisions or principles of that Constitution."

The Court, by nine votes to three gave the following answer: that the decrees in question are not consistent with the Constitution and that they violate certain provisions and certain principles thereof. See DANZIG under *History*.

In its Opinion, the Court observes in the first place that though, in order to give the opinion for which it is asked, it must examine the domestic legislation of the Free City, including the Constitution of Danzig, the problem submitted to it nevertheless contains an international element resulting from the fact that the Constitution is placed under the guarantee of the League of Nations. The question had been brought before the Council

by the High Commissioner of the League of Nations at Danzig, who had himself received a petition from three political parties at Danzig, other than the national socialist party which is in power. In the contention of the petitioners, the amendments made by the impugned decrees in the Danzig Criminal Law open the doors wide to arbitrary decisions and violate two articles of the Constitution of the Free City.

The Court pointed out that any inconsistency between the decrees—which have been issued by the Senate under a law empowering it to legislate by decree within certain very wide limits—may be due either to inconsistency between the terms of the decrees and the articles or principles of the Constitution, or to the fact that the decrees overstep the limits of the powers given to the Senate or to the fact that the law conferring these powers may itself be contrary to the Constitution.

Observing, in the first place, that what it has to examine is whether the decrees as they stand are necessarily in conflict with the Constitution so that they cannot be applied without violating it, and in the second place, that if any article or principle of the Constitution is violated by the decrees, that will suffice to show that the latter are not consistent with it, the Court proceeds to consider the question from the point of view of the contents of the decrees.

Examining the decrees, the Court found that they replace the rule previously in force at Danzig—to the effect that an act was punishable only if the penalty applicable to it were prescribed by a law in force before the commission of the act—by a rule to the effect that an act is also punishable, even if there is no particular penal law applicable to it, if it deserves punishment according to the fundamental idea of some penal law and according to sound popular feeling. The Court, analyzing this innovation, arrived at the conclusion that, under the system inaugurated by the decrees, what will be applied will not be the text of the law itself—which would be equally clear both to the judge and to the accused—but what the judge, in his own judgment, believes to be in accordance with the fundamental idea of the law and with sound popular feeling. Thus a system under which the criminal character of an act and the penalty attached to it are known to the judge alone replaces a system in which this knowledge was equally open to both the judge and the accused. Moreover, opinion as to what is condemned by sound popular feeling—a very elusive standard—will vary from man to man.

Proceeding next to analyze the Danzig Constitution, the Court lays stress on certain principles emerging from it. In the first place, according to its Constitution, the Free City is a *Rechtsstaat* (State governed by the rule of law); secondly, the Constitution provides for a series of fundamental rights the free enjoyment of which it guarantees within the bounds of the law; the Danzig Constitution even lays very special emphasis on the importance and inviolability of the individual liberties which ensue from these fundamental rights. These liberties are not all absolutely unrestricted; but they can only be restricted by law. This, in the view of the Court, involves the consequence that the law itself must define the conditions in which such restrictions of liberties are imposed; for if a law could simply give a judge power to deprive a person of his liberty, without defining the circumstances in which his liberty might be forfeited, it could render entirely nugatory

tory the guarantees provided in certain articles of the Constitution.

Lastly, comparing the results of its analysis of the decrees in question and of the Constitution, the Court finds that, so far from supplying the limitation required by the Constitution, the decrees empower a judge even to punish an act not prohibited by law, provided that he relies on the fundamental idea of a penal law and on sound popular feeling. They transfer to the judge, therefore, an important function which the Constitution intended to reserve to the law. The Court recognizes that a criminal law sometimes and within certain limits leaves the judge to determine how to apply it; but it considers that, in the present case, the discretionary power is too wide to allow of any doubt but that it exceeds these limits. The Constitution treats the problem of the repression of crime from the standpoint of the individual, whom it aims to protect against the State; the decrees, on the other hand, treat the problem from the standpoint of the community, their aim being to protect the latter against the criminal.

The Court therefore arrived at the conclusion that the decrees are not consistent with the guarantees provided by the Constitution for the fundamental rights of individuals.

WORLD LEAGUE AGAINST ALCOHOLISM. An international organization for education on the alcohol problem, established at Washington, D. C. in 1919, by representatives of national temperance organizations from 11 countries. Membership in this League is limited to temperance organizations that are national in the scope of their operations. In 1935 the membership consisted of 60 such national temperance organizations in 34 countries. The executive offices are at Westerville, Ohio, and Washington, D. C. The Scientific Temperance Federation, with headquarters at Boston, acts as the scientific research department for this League, and the Intercollegiate Association for Education on the Alcohol Problem, with headquarters at Washington, D. C., is the student department of this League. All the activities of the League are under the direction of the General Secretary, Ernest H. Cherrington.

WORMS. See ENTOMOLOGY, ECONOMIC.

WRESTLING. Danno O'Mahoney, an Irishman, took over the world's heavyweight wrestling championship, at least that championship viewed with approval and sanctioned by more ruling athletic commissions than any other, in 1935. The big Irish lad arrived in the United States late in December, 1934, and proceeded to mow down all opponents without a loss. O'Mahoney did most of his grappling in Boston and developed into a superior drawing card there and in mid-June tossed Jim Londos for the title. A month later he pinned Chief Little Wolf at the Yankee Stadium, New York, and back in Boston in the autumn he threw Ed Don George before 30,000 persons, to clamp down his claims to supremacy. Other "world's champions" recognized in outlying parts of the country were Vincent Lopez in California, and Everett Marshall in Colorado.

The wrestlers of Oklahoma A. and M. won both the N.C.A.A. and A.A.U. tournaments and Lehigh's grapplers were again victorious in the Eastern collegiate championships.

WÜRTEMBERG. See GERMANY.

WYOMING. Population. On Apr. 1, 1930 (Fifteenth Census), 225,565; July 1, 1934 (latest Federal estimate), 232,000; 1920 (Census), 194,-

402. Cheyenne, the capital, had (1930) 17,361 inhabitants.

Agriculture. The accompanying table shows the acreage, production, and value of the principal crops for 1935 and 1934:

Crop	Year	Acreage	Prod Bu	Value
Hay (tame)	1935	818,000	1,115,000*	\$8,028,000
	1934	665,000	670,000*	8,643,000
Sugar beets	1935	41,000	530,000*	.....
	1934	42,000	434,000*	2,166,000
Potatoes	1935	27,000	2,430,000	1,701,000
	1934	25,000	1,000,000	790,000
Wheat	1935	222,000	2,385,000	2,159,000
	1934	130,000	1,041,000	907,000
Corn	1935	229,000	2,519,000	1,763,000
	1934	131,000	655,000	655,000
Oats	1935	137,000	3,562,000	1,354,000
	1934	83,000	1,743,000	959,000

* Tons.

Mineral Production. The mining of coal increased moderately, to a yearly total of some 5,150,000 net tons (1935) from 4,367,961 (1934). The production of petroleum recovered, to a yearly total of about 13,065,000 barrels for 1934, from 11,227,000 barrels for 1933. The decline in the yield of the main field, the Salt Creek, was more than offset by successful development in other fields. In spite of the scarcity of profitable outlets for natural gas, its annual production attained about 26,000,000 Mcu ft. for 1934. Some 34,900,000 gallons of gasoline were derived from natural gas in 1934.

Education. The number of the inhabitants of school age was reported for the academic year 1934-35 as 71,055. The enrollments of pupils in the public schools numbered 57,082. Of these, 42,448 were in common schools or elementary grades, and 14,634 were in high schools. Both the enrolled groups were greater than they had been the year before. The year's expenditures for public-school education exceeded those for the year previous and attained \$5,398,438. The pay of teachers for the year, averaged by groups, was \$600.47 for rural schools; for elementary graded schools, and for special teachers, \$1142.28; for high schools, \$1192.12.

The University of Wyoming continued to conduct courses by correspondence, for the further education of unemployed graduates of the high schools.

Charities and Corrections. Charge of the State-maintained institutions for the care and custody of persons rested, in 1935, in the Board of Charities and Reform. This body was composed of five ex-officio members, namely: the Governor, Secretary of State, Auditor, Treasurer, and Superintendent of Public Instruction. The institutions under the Board's control were: the State Penitentiary, State Penitentiary Farm, Wyoming General Hospital, State Hospital (for the insane), Training School (for the feeble-minded and epileptic), Tuberculosis Sanatorium, Wyoming Industrial Institute (boys), Girls' Industrial Institute, Soldiers' and Sailors' Home, and State Home for Dependent Children. The Board also handled applications for pardons and supervised the Hot Springs State Park and the Saratoga Hot Springs State Reserve.

Legislation. A system of control over the traffic in alcoholic liquor was created; a State Liquor Commission received broad powers, enabling it to exercise a monopoly of the wholesale traffic. The retailers were obliged to pay \$1500 a year each for a license to serve drinks; drug stores might sell by the bottle on prescription.

Death by lethal gas was made the State's form of capital punishment. Persons who had resided in the State for 60 days were allowed to bring action

for divorce; but another bill, permitting divorce to be granted in some cases without corroborative evidence, was vetoed. A tax on retail sales was enacted.

Political and Other Events. The State Liquor Commission put in effect on April 1 its monopoly of the wholesale liquor business in the State, becoming the sole lawful purveyor to the retailers. It hoped by its monopoly to prevent the sale of illicit liquor.

The State Prison's manufactory of shirts at Rawlins was forced to close after the passage of the Federal Cooper-Hawes Act forbidding interstate transportation of prison-made goods. Preparations were made for the prison manufacture of woolen material for use within the State. See DUST STORMS.

Officers. The chief officers of the State, serving in 1935, were: Governor, Leslie A. Miller; Secretary of State, Lester C. Hunt; Treasurer, Kirk Baldwin; Auditor, William Jack; Attorney-General, Ray E. Lee; Superintendent of Public Instruction, Jack R. Gage.

Judiciary. Supreme Court: Chief Justice, Ralph Kimball; Associate Judges, Fred H. Blume, W. A. Riner.

WYOMING, UNIVERSITY OF. A State institution of higher education at Laramie, founded in 1886. The enrollment for the autumn term of 1935 was 1500. The 1935 summer session had an attendance of 1203. The faculty numbered 118. The productive funds amounted to \$2,583,097. There were 82,514 volumes in the library. The Wyoming Individualized Programme Plan was introduced, and a new Liberal Arts Building was opened and a U.S. Petroleum Research Laboratory established. President, Arthur Griswold Crane, Ph.D.

YACHTING. Yachtsmen had a very successful season during 1935, more races being run with more yachts entered in them. Gerald B. Lambert took the *Yankee* to England and achieved considerable success, winning eight races.

The trans-oceanic race of 3050 miles, from Newport, R. I., to Bergen, Norway, was won by Philip Le Boutillier's *Stormy Weather*, skippered by Roderick Stephens, Jr., and although it was the second to arrive, with its time handicap, made the best time of 19 days, 5 hours, and 28 minutes (June 6-July 2). This yacht also won the Fastnet race of the Royal Ocean Racing Club. Stephens sailed the winning *Dorade* in 1933. During the ocean race, three members of the crew of the *Hamrah* were swept overboard in a storm, and the yacht put back to port.

Harold S. Vanderbilt's *Prestige* won both the Astor Cup Race, sloop division (August 21), and the King's Cup Race (August 22). R. B. Metcalf's *Sachem* won in the schooner division of the Astor Cup Race.

The Seawanhaka Cup was retained by the Seawanhaka-Corinthian Yacht Club, P. V. Shields piloting the winning boat. In a team match, however, the Scandinavian crew (Norway, Sweden, and Denmark) defeated the Americans.

Adrian Iselin's *Ace* acquired the Bacardi Trophy, the Cup of Cuba, the Bermuda Challenge Trophy, and the Royal Bermuda Yacht Club Trophy during the winter racing in Bermuda. The woman's national sailing championship was won for the Cohasset (Mass.) Yacht Club by the Misses Frances McElwain, Frances J. Williams, and Katherine Johnson. Princeton was intercollegiate title winner.

YAKUTSK S.S.R. See SIBERIA.

YALE UNIVERSITY. A nonsectarian institution for higher education in New Haven, Conn., founded in 1701. The enrollment for the autumn of 1935 was 5493. Of the candidates for degrees or certificates, 660 were in the Graduate School, 1519 in Yale College, 468 in the Sheffield Scientific School, 192 in the School of Engineering, 878 in Freshman Year, 218 in the School of Medicine, 221 in the Divinity School, 381 in the School of Law, 368 in the School of the Fine Arts, 86 in the School of Music, 37 in the School of Forestry and 140 in the School of Nursing. The faculty numbered 881, not counting 721 assistants in instruction and administration. Irving Fisher, Professor of Political Economy, and Frank E. Spaulding, Sterling Professor of Education, retired at the close of the year 1934-35. Dr. Stanhope Bayne-Jones was appointed Dean of the School of Medicine. Two new appointments to professorships were those of Frederick S. Dunn as Professor of International Relations and James Grafton Rogers, as Professor of Law. Professor Rogers was also appointed Master of Timothy Dwight College, the ninth of the undergraduate colleges to be completed. The total endowment of the University amounted to \$95,838,568, and the income for the year was \$7,479,211. The libraries contained more than 2,400,000 volumes. For description of the college plan, which was made possible through gifts from Edward Stephen Harkness, see the NEW INTERNATIONAL YEAR BOOK for 1933. President, James Rowland Angell, Ph.D.

YANAON. See FRENCH INDIA.

YAP. See JAPANESE PACIFIC ISLANDS.

YEMEN. See under ARABIA.

YERBA BUENA TUNNEL. See TUNNELS.

YOUNG MEN'S CHRISTIAN ASSOCIATION. An educational, social, physical, and spiritual movement for men and boys, which originated in London in 1844 under the leadership of George Williams. In 1935 there were in 54 countries of the world 9852 local associations, unions, or fellowships with a membership of 1,642,876. These associations employed 5217 officers and owned and occupied 2065 buildings. The United States had the largest membership (1,030,395) and the largest number of Y.M.C.A. buildings, representing a net property value of \$186,987,400. Local associations numbered 1148, with 3461 employed officers and 171,384 directors and committee men.

The general board of the associations in the United States is the National Council of the Young Men's Christian Associations, with headquarters at 347 Madison Avenue, New York City. Beatty B. Williams, president; John E. Manley, general secretary. The National Council is one of 33 national movements of federated local associations which constitute the World Alliance of Young Men's Christian Associations, with headquarters at 2 Rue de Montchoisy, Geneva, Switzerland. The president in 1935 was Dr. John R. Mott, of New York City. Tracy Strong, of Geneva, was general secretary.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION. An organization whose purpose is to advance the physical, social, intellectual, and spiritual interest of young women. The first Association was formed in New York City in 1858. By 1935 there were throughout the United States 1021 Associations, affiliated in a national organization whose active body is the National Board of the Young Women's Christian Associations. Of these, 427 were in cities, towns, and rural communities, and 594 on college and university campuses. There also were 69 branches and centres for colored girls and women, 28 International Institutes, and 88 other

Associations working with foreign girls. During the past year there have been more than 2,000,000 women and girls served by the Y.W.C.A. of this country or taking some part in its programmes. Of these 2,000,000 about 407,000 were members, of whom 30,000 were student members. Among the others were Girl Reserves, the 'teen-age members; girls and women in industry; and business and professional women.

The organization employed in 1935, 2522 professional workers, of whom 2400 were connected with local Associations, 96 were on the national staff, and 26 were American secretaries serving in foreign countries. Working as volunteers, as board and committee members, and as advisers in local Associations were 79,000 women. The next biennial convention will be held in Colorado Springs, Colo., April 29-May 5, 1936. Mrs. Harrie R. Chamberlin of Toledo, O., is the president of the national organization. Mrs. Frederic M. Paist of Wayne, Pa., is president of the National Board, to which is entrusted the work of the national body during the interim of conventions. Headquarters of the National Board are at 600 Lexington Avenue, New York City, with Miss Anna V. Rice as general secretary and Miss Emma P. Hirth as associate secretary.

YOUTH PROGRAMME. See CHILD WELFARE; UNIVERSITIES AND COLLEGES.

YUGOSLAVIA. A kingdom in the Balkans Capital, Belgrade (Beograd). Sovereign in 1935, Peter II, who succeeded to the throne under a regency upon the assassination of his father, King Alexander I, on Oct. 9, 1934.

Area and Population. With an area of 96,010 square miles, Yugoslavia had a population estimated in 1934 at 14,730,000 (13,930,918 at the 1931 census). About 80 per cent of the people live on farms or in rural communities. Living births in 1933 numbered 451,514; deaths, 243,518; marriages, 111,418. Populations of the chief cities at the 1931 census were: Belgrade (Beograd), 241,542; Zagreb (Agram), 185,581. Subotica, 100,058; Sarajevo, 78,182; Skoplje, 64,807; Ljubljana, 59,768; Novi Sad, 63,966. In 1931 48.7 per cent of the population belonged to the Serbian Orthodox faith, 37.45 per cent were Roman Catholics, 11.2 per cent Moslems, 1.66 per cent Protestants, and 0.49 per cent Jews.

Education. About 41 per cent of the population was estimated to be illiterate in 1934, compared with 45 per cent at the 1931 census. School attendance in 1933-34 was: Elementary, 1,306,700; secondary, 88,639; university, 14,881.

Production. About 85 per cent of the population is directly or indirectly dependent upon agriculture. In 1932, 17,549,000 acres, or 20 per cent of the total area, was suitable for cultivation, 1,501,000 acres were under orchards, vineyards, and gardens, 15,057,000 acres in meadow and pasture, and 19,222,000 acres under forest. Agricultural production was valued at 12,048,000,000 dinars in 1932. The chief crops in 1934 were (in thousands of units): Wheat, 68,328 bu.; rye, 7688 bu.; barley, 18,744 bu.; oats, 22,972 bu.; corn, 202,912 bu.; wine, 102,146 gal.; prunes (exports), 48,500 lb. The 1934 potato crop was 1,843,800 metric tons; tobacco, 6000 metric tons; beet sugar (1934-35), 56,000 metric tons. Livestock in 1934 included 3,990,000 cattle, 2,792,000 swine, 8,868,000 sheep, 1,344,000 horses, mules, and asses, and 39,000 buffaloes. The normal timber cut is about 530,000,000 cu. ft. annually.

Mineral production in 1933 was valued at 1,159,016,000 dinars. Output of the chief minerals in 1934 was (in 1000 metric tons): Coal, 387; lignite,

3926; bauxite, 86; iron ore, 179; copper, 44.4; lead, 10.1; zinc, 4.4; chrome ore (1933), 23. Gold output in 1934 was 2219 kilograms; silver, 129,310 kilograms. Flour milling, brewing, distilling, cotton spinning and weaving, and boot, carpet, and pottery making are the principal manufacturing industries.

Foreign Trade. Imports for consumption in 1934 were valued at 3,573,298,000 dinars (2,882,516,000 in 1933) and exports at 3,878,203,000 dinars (3,377,845,000 in 1933). Cotton yarn, iron and steel, raw cotton, cotton fabrics, machinery, chemicals, and wool fabrics were the leading imports in 1934. The principal exports were (in 1000 gold dollars): Wood for building, 9131; corn, 7649; crude copper, 4710; fruits and nuts, 2330; swine, 2231; meat, 1892. Of the 1934 imports, Italy supplied 15.5 per cent; Germany, 13.9; Austria, 12.4; Czechoslovakia, 11.7; United States, 6.4. Of the exports, Italy took 20.6 per cent by value; Austria, 16.3; Germany, 15.4; Czechoslovakia, 11.3; and the United States, 4 per cent.

Imports in 1935 totaled 3,699,774,000 dinars; exports, 4,030,360,000 dinars. United States statistics for 1935 showed imports from Yugoslavia of \$3,971,233 (\$2,203,865 in 1934) and exports to Yugoslavia of \$801,997 (\$590,742 in 1934).

Finance. Excluding financial operations of state monopolies, hospitals, and public undertakings, the closed budget accounts for the fiscal year ended Mar. 31, 1934, showed a deficit of 186,100,000 dinars on total receipts of 6,467,100,000 dinars. On the same basis, the budget estimates for 1934-35 balanced at 6,914,400,000 dinars; on the basis of total budget operations, the 1934-35 estimates balanced at 10,171,250,000 dinars and the estimates for 1935-36 balanced at 10,364,000,000 dinars.

The public debt on July 1, 1932, totaled 38,783,558,000 dinars (external debt, 32,763,243,000 dinars). The dinar (par value, \$0.0298 in 1935) exchanged at an average of \$0.0164 in 1932, \$0.0176 in 1933, and \$0.0227 in 1934.

Communications. With 6343 miles of line (4019 miles under state operation) the Yugoslav railways in 1933 carried 31,631,000 passengers and 14,608,000 metric tons of freight, earning gross receipts of 1,781,281,000 dinars. Highways of all descriptions totaled 25,158 miles in 1933; navigable waterways, 1182 miles. Airlines connected Belgrade with Skoplje, Paris, Sofia, Bucharest, and Istanbul. The merchant marine on June 30, 1935, comprised 167 vessels of 347,018 gross tons.

Government. The Constitution of Sept. 3, 1931, declared Yugoslavia a constitutional monarchy, in which legislative power is vested jointly in the King and Parliament and executive powers in the King, acting through a ministry responsible to Parliament. Parliament consisted of a Senate of 76 members (29 appointed by the Crown and 47 elected) who serve for six years and a Lower Chamber (Skupstina) of 305 members elected for four years. The Regency appointed to govern during the minority of King Peter was composed of Prince Paul of Yugoslavia, a cousin of King Alexander; Radenko Stankovitch, and Dr. Ivan Perovitch. Premier at the beginning of 1935, Bogoljub Yefitch, of the Yugoslav National Party.

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Internal Affairs. The struggle of the Croats, Slovenes, and other minority groups to break the domination of the Serb military dictatorship and secure a large measure of regional autonomy continued unabated during 1935. The stubborn re-

sistance of the Croats was reinforced by the influential support of Prince Paul, one of the three regents, and of Serb liberal groups who joined in working for the restoration of representative government and reconciliation of the diverse nationalities in Yugoslavia. This support enabled the minority groups to make a partially successful assault upon the dictatorship. The result, however, was to strengthen the Fascist tendencies of the majority Serb group, and by the end of 1935 the conflict between opposing political and racial factions had assumed even greater intensity.

The Yefitich Cabinet, formed Dec. 21, 1934, had made a step toward reconciliation of the Croats by releasing from prison Dr. Vladimir Matchek, the Croat leader. This move was followed, on Feb. 5, 1935, by the dissolution of the Parliament and the calling of new elections for May 5. The old Parliament, elected under a system which prevented all Opposition elements from registering their wishes, had been boycotted by the Croats and Slovenes. It was hoped that its dissolution presaged a return to democratic government, but the actions of the Yefitich Government soon indicated that it had no intention of permitting the free expression of popular opinion. On February 28 the Premier declared that there could be no return to the party system in effect previous to the dictatorship.

Although refusing to permit the Socialists and National Dissidents to participate in the elections, the government permitted Dr. Matchek's Croat Peasant party and two smaller Opposition groups to present candidates. Nevertheless it made sure of a victory by widespread terrorism, intimidation, and manipulation of the electoral machinery. According to final official returns the government secured 1,700,000 votes against 1,076,000 for the opposition, but due to the electoral system it won 310 seats in Parliament to 67 captured by the Opposition. The Croat Peasant party polled 983,248 votes. In Croatia it obtained from 80 to 90 per cent of the total votes cast, despite official obstruction and police terrorism. It was reported that at least 11 persons were killed and scores wounded during the election.

On the ground that the government's repressive measures and falsification of the electoral returns had violated the regency's pledge of a fair and free poll, the entire Opposition bloc, including Croats and some Serbs, voted to boycott Parliament until a neutral government dissolved it and held fair elections. The Archbishop of Zagreb, speaking for the Roman Catholic Croats, warned Prince Paul that a repetition of the repressive methods used in the May 5 election would provoke a revolution. The Croat position aroused the extreme Serb nationalist members of the Yefitich Cabinet to such violent threats and attacks that the more moderate cabinet Ministers felt obliged to dissociate themselves from these sentiments. Accordingly five Ministers resigned on June 20, causing the downfall of the entire cabinet.

Immediately after the Yefitich Cabinet's fall, Prince Paul invited Dr. Matchek to consult with him. This procedure, in striking contrast to the dictatorial methods in vogue at Belgrade during the preceding years, aroused new hope for a modification of Serb policy. The Croat leader's trip to the capital was in the nature of a triumphal procession, with crowds shouting "Down with dictatorship." During two interviews with Prince Paul Dr. Matchek reiterated the Croats' refusal to enter Parliament until it was dissolved and

fair elections held. He indicated, however, that his party would not oppose a neutral government which would prepare the way for new elections and reestablish personal and political liberty.

As a result of these negotiations, a new ministry was formed on June 24 under Dr. Milan Stoyadinovitch, a former Finance Minister who had opposed the dictatorship. Gen. Pera Zivkovitch, Premier under King Alexander's dictatorship, became Minister of War and Father Anton Koroschetz, leader of the Slovene party which had voluntarily boycotted the May 5 elections, was chosen Minister of Interior. Two other parties formerly proscribed by the government—the Serbian Radicals and the Bosnian Moslems—also obtained representation on the cabinet.

In his statement of policy before Parliament on July 4 Dr. Stoyadinovitch declared that while the government desired to restore parliamentary government, it would proceed gradually toward this goal. The unitary form of government would be retained and the old party system would not be restored. However, the Opposition demand for a more equitable electoral law would be granted and restrictions on the press and free assembly would be relaxed. As to foreign policy, the Premier forecast no change in the existing system of alliances with France, the Little Entente, and the Balkan Entente. Soon afterward he obtained Parliamentary authority to withdraw the restrictions upon the press, public meetings, and political parties. There was a rapid revival of political activity, and the autonomist movement in Croatia was more openly promoted. On August 19 General Zhivkovitch reported to Prince Paul that the police and Serb authorities in Croatia were being openly flouted. He demanded a return to the strong-arm policy by which the Croat agitation had previously been suppressed.

About the same time Dr. Stoyadinovitch undertook to stabilize his government and consolidate its power through the organization of a new political party representing all of the groups opposed to the former Yefitich Government except the Croat Peasant party, which was excluded. It included the Premier's Serbian Radical party, the Bosnian Moslems under Dr. Mehmed Spaho, and the Slovene Clerical party under Father Koroschetz. Committed to the monarchy and parliamentary democracy, this so-called Yugoslav Radical Union favored larger autonomy for the banats or provinces but was unwilling to accept the Federal system of completely autonomous regions advocated by the Croats. On August 23, soon after the announcement of the new party, three Croatian members of the cabinet resigned. They considered the new party an effort to perpetuate the Stoyadinovitch régime indefinitely.

Formation of the Yugoslav Radical Union also provoked the open hostility of the Yugoslav National Union under former Premier Yefitich, which still controlled a majority in Parliament and had the support of two of the three regents—Dr. Radenko Stankovitch and Dr. Ivan Perovitch. This powerful group showed pronounced tendencies to defend Serb domination by resorting to fascism. On October 20 it demonstrated its control of Parliament by defeating the government candidate for the speakership, 171 to 138. It then called upon Premier Stoyadinovitch to resign. The latter bluntly refused, pointing out that under the Constitution the government was not dependent upon parliamentary support. In this stand the Premier enjoyed the support of the previously

hostile Croats and Serbian Democrats. On November 13 the government won control of the five parliamentary committees, but by such a narrow margin that its position remained highly precarious to the end of the year. Dissensions among the groups forming the government coalition was reflected in the resignation of the Ministers of Public Works and Physical Training on December 20. Leaders of Dr. Stoyadinovitch's own Serbian Radical party were demanding the Premier's resignation.

Meanwhile the difficulties of satisfying Croat demands was indicated by a "minimum programme" outlined by Dr. Matchek in November. Croatia, he said, must have its own parliament, army, and complete control of its internal affairs, including the collection of taxes. The only tie between Croatia and Serbia would be a common Foreign Office and diplomatic service, a common War Ministry in Belgrade, and a Ministry of Finance authorized to collect and administer customs revenues only. There would be a joint Parliament at Belgrade composed of delegations chosen by the Croat and Serb parliaments. The response in Belgrade from both the government and the Opposition demonstrated that there was small hope of these demands being granted.

The government's troubles were not confined to these quarters. The widespread corruption prevalent in public and private life was demonstrated by a six-months' trial at Osijek of more than 100 persons, many of whom were prominent officials and business men, on charges of bribery, tax evasion, the forging of documents, and other offenses. Forty-eight were acquitted and the remainder were sentenced to prison for terms ranging from two months to eight years. On December 27 police announced that they had broken up a widespread Communist plot with ramifications throughout Yugoslavia and arrested some 200 alleged members of the conspiracy.

Economic Developments. The deflationary economic and financial policy followed throughout the depression was abandoned early in March by the Yefitch Government. The Ministry of Finance was given control over the State Mortgage, Postal Savings, and Privileged Agricultural Banks and authorized to adopt an "easy money" policy by reducing the gold cover to 25 per cent of sight obligations. Interest rates on loans and deposits were lowered; publication of the actual value of the dinar on local exchanges was resumed; and a two-year public works programme costing 1,000,000,000 dinars was launched, funds for which were to be raised by issuance of special 5- to 10-year bonds. The public works programme, inaugurated in May, was immediately reflected in increased employment and large purchases of materials throughout the kingdom. The continued budget deficit forced the government on September 19 to announce new reductions in living allowances of its officials and employees, anticipated to produce savings of 400,000,000 dinars.

Foreign Relations. The conclusion of the Franco-Italian agreement of Jan. 7, 1935, designed to preserve Austria's independence against Germany and to afford Italy a field for expansion in Ethiopia, was followed by a marked relaxation of tension between Yugoslavia and Italy, whose relations had been strained for more than a decade. Mussolini now abandoned his threatening attitude toward Yugoslavia, withdrew his support of Croat and Macedonian terrorists seeking to overthrow the Yugoslav régime, and modified his sup-

port of Hungary's drive for restoration by force of former Hungarian territories absorbed by Yugoslavia after the World War. The Italian Minister to Yugoslavia early in 1935 put forward radical and attractive proposals for the liquidation of Italo-Yugoslav differences. It was reported in March that Premier Yefitch planned to sign a commercial treaty with Mussolini in Rome as the first step toward a political agreement.

Before further action could be taken the European crises produced by German rearmament and by Mussolini's preparations to sabotage the League in order to conquer Ethiopia called a halt to the Italo-Yugoslav rapprochement. As a member of the Little Entente and Balkan Entente, Yugoslavia took a strong stand in defense of the League and of the League system of collective security. She joined unreservedly in the application of League sanctions against Italy, although the latter country took 20 per cent of all Yugoslav exports. Toward the end of the year, Yugoslavia pledged herself to go to the military aid of Great Britain in case the British fleet was attacked in the Mediterranean as a result of the enforcement of League sanctions. The threat of a European war growing out of the Anglo-Italian conflict over Ethiopia was considered at the annual meeting of the chief of staffs of the Little Entente powers held at Belgrade on November 24.

The conferences of the Little Entente Foreign Ministers at Bucharest on May 10-11 and at Bled, Yugoslavia, on August 29-30 reaffirmed their opposition to revision of the peace treaties and to the restoration of the Hapsburgs in either Austria or Hungary. Yugoslavia, however, continued its refusal to recognize the Soviet Union, despite the urgings of the other members of the Balkan and Little Ententes. With the decline of Italian influence in Central Europe, the pressure upon the small countries of that region to choose sides between Germany and the Soviet Union in the expected European war brought signs of division within these two combinations. Yugoslavia at the end of 1935 appeared to be moving toward an alliance with Germany, while Czechoslovakia and Turkey were already committed to cooperation with Russia. Relations with Hungary became much more friendly than in 1934 (see HUNGARY under *History*). The rapprochement between Yugoslavia and Bulgaria, inaugurated under the Georgiev dictatorship in 1934, was imperiled in 1935 by the triumph of King Boris and the pro-Italian party over the pro-Yugoslav forces in Bulgaria (q.v.).

See AUSTRIA, FRANCE, GERMANY, GREAT BRITAIN, GREECE, ITALY, RUMANIA, and TURKEY under *History*.

YUKON, yōō'kōn. A territory of Canada. Area, 207,076 sq. miles; population (1931 census), 4230. Dawson (capital) had 828 inhabitants; Whitehorse, 540. In 1933 there were 5 schools with 10 teachers, and 180 pupils.

Production. The mining of coal, copper, silver, lead, and gold was the main occupation of the people. Mineral production for 1934 (including Northwest Territories) was valued at \$1,669,159 including gold (38,799 oz. fine), \$1,338,566; silver (553,587 oz. fine), \$262,738. Birch, black spruce, white spruce, balsam, and poplar were the principal forest trees. Fur production (1933-34): 43,803 pelts valued at \$122,999.

Government. For the year ended Mar. 31, 1934, revenue amounted to \$168,686; expenditure, \$168,437. The Yukon was governed by a comptroller

and a territorial council of three elected members, and was represented in the Dominion Parliament at Ottawa by a member in the House of Commons. Comptroller, George A. Jeckell. See EXPLORATION.

ZANZIBAR PROTECTORATE. A British protectorate in East Africa consisting of the islands of Zanzibar (640 sq. m.; pop., 137,741) and Pemba (380 sq. m.; pop., 97,687). Total population (Jan. 1, 1935 estimate), 244,104 compared with 235,428 (1931 census). The capital town, Zanzibar, had 45,276 inhabitants.

Production. The production of cloves approximates 82 per cent of the world's supply. There were 3,500,000 clove trees on 48,000 acres in Zanzibar and Pemba. Practically all cloves are exported. Coconut bearing palms were estimated at 3,850,000.

Trade. In 1934, including reexports of Rs2,003,000 and specie of Rs292,000, exports totaled Rs10,200,000 (rupee averaged \$0.3788 for 1934) of which the main items were cloves (Rs6,369,000), clove stems (Rs324,000), and copra (Rs953,000); imports, inclusive of bullion and specie of Rs795,000, totaled Rs10,227,000.

Government. Revised estimates (1935): revenue, £431,035; expenditure, £430,613. Budget estimates (1936): revenue, £465,402; expenditure, £457,480. The nominal ruler in 1935 was the Sultan, Seyyid Sir Khalif bin Harub but actual control rested with the British Resident (in 1935, Sir R. S. D. Rankine).

ZINC. The mine output of recoverable zinc in the United States in 1935 amounted to 517,020 tons, an increase of 18 per cent over the production of 438,726 tons in 1934, according to a preliminary report of the U.S. Bureau of Mines. The Joplin region, the largest producing district in the country, advanced from a total of 153,092 tons in 1934 to 190,350 tons in 1935. Production in New Jersey advanced from 76,553 tons in 1934 to 86,260 tons. Zinc concentrates were priced at Joplin at \$26 a ton for the first five months of the year, rising from the middle of June to \$32 a ton in October, remaining at that price through the close of the year.

The American Zinc Institute reported a total production of slab zinc in 1935 of 431,085 tons in the United States, about a 20 per cent increase over the production of 367,000 tons in 1934. Stocks on Dec. 31, 1934, were 118,000 tons, but there were only about 84,000 tons on Dec. 31, 1935. In the consumption of zinc, about 100,000 tons were used in galvanizing, and something over that amount in the making of brass. Increasing lines of new consumption were in the use of zinc alloy die casting in automobile parts—hardware, carburetors, radiator grilles, etc.—and in new compounds for pigments, and to the use of zinc and zinc salts in orchards.

Outside of the United States, the total production of the world by primary metallurgical works, including zinc derived from dross and ashes in Belgium, France, and Germany, amounted to 1,034,124 short tons, according to a report of the American Bureau of Metal Statistics. This figure added to the production of the United States gave a grand total of 1,465,209 short tons for the world (1,301,595 short tons in 1934). By countries the 1935 production was: Other North America, 191,594 short tons; Belgium and Netherlands, 217,244 short tons; France, 57,416 short tons; Germany, 136,806 short tons; Italy, 28,950 short tons; Rhodesia, 23,103 short tons; Spain, 8430 short tons; Australia, 142,881 short tons, and the combined totals of production, partially estimated, of Nor-

way, Poland, Japan, Indo-China, Czechoslovakia, Yugoslavia, and Russia, 227,700 short tons.

The Canadian production, according to the Dominion Bureau of Statistics, amounted to 158,125 short tons (149,290 short tons in 1934).

The United States imported 10,497 tons of zinc ore in 1935, all from Mexico, and also 4479 tons of blocks, pigs, etc. Total exports of slabs, plates, blocks, pigs, rolled zinc, dross, and zinc dust amounted to 8505 tons. The export of galvanized products accounted for an estimated 12,800 tons in addition. See CHEMISTRY, INDUSTRIAL AND APPLIED.

ZIONISM. See JEWS; PALESTINE.

ZONTA INTERNATIONAL. An organization established in 1919 to "work for the advancement of understanding, goodwill, and peace through a world fellowship of executive women in business and the professions, united in the Zonta ideal of service." In 1935 there were 125 clubs in the United States, Hawaii, Canada, Germany, Austria, Australia, Denmark, and Sweden, with a membership of approximately 3300. Membership is limited to one outstanding representative for each business or profession in the community, who pledges herself to cooperate with others in its civic, social, and commercial development. The official monthly publication is *The Zontian*. Headquarters are at 59 East Van Buren Street, Chicago, Ill.; Miss Dora E. Neun, president; Miss Harriet C. Richards, executive secretary.

ZOOLOGY. The American Society of Zoologists met at Princeton, N. J., in December, 1935, under the presidency of R. W. Hegner. At the meeting of the British Association for the Advancement of Science at Norwich in September, W. A. F. Balfour-Browne was chairman of the zoological section. The International Congress of Zoology met at Lisbon in September with Arthur Ricorda Jorge as President and was attended by some 500 members. An important part of the programme was a meeting of the Committee on Zoological Nomenclature which is attempting to establish some uniformity in the usage of taxonomic names. At the British Association meeting was celebrated the centenary of Darwin's visit to the Galapagos Islands in September, 1835. It was announced at this meeting that the Ecuadorian government has set aside certain of these islands as wild-life reservations in commemoration of Darwin's visit. In *Half Mile Down* Beebe recorded observations made in the bathysphere at a depth of 3028 feet off Bermuda.

Since 1920 the programme of the American Museum of Natural History has included a study of the bird fauna of the Pacific Ocean. The latest expedition was the Crocker (financed by Templeton Crocker of San Francisco) which left late in 1934 and returned in April of 1935. Islands visited included Tahiti, Marquesas, and Pitcairn. Collections were made of materials for the preparation of bird groups. Important anthropological data were also secured.

General. To the zoologist of the early 19th century a species represented a definite act of creation and ability to recognize and call by name a large number of species was the mark of a great naturalist. Darwin's *Origin of Species* overthrew this belief and with the development first of observational and later experimental morphology the study of species as such fell into disrepute. Evidence of renewed interest in the species problem is shown by the fact that symposia on this subject were held by the Zoology section of the British Association at

its meeting in September and by the American Society of Zoologists meeting at Princeton in December. With the recognition of the fact that the animal body has a complex chemical composition it seems certain that true specific differences are due to chemical differences in the composition of the respective groups. If this be the case it is important that an experimenter should be certain that he is working with individuals of a definitely determined species since otherwise he might be in the position of a chemist who is using impure reagents. Evidence that such chemical differences do occur between different races of white rats was given by Loeb and King (*Am. Nat.* 69, p. 5). They stated that multiple characters determine individual differences and lead to incompatibilities when transplants are introduced into different organismal differentials. Balfour-Browne (*Nature* 136, p. 382), stated that if it were possible to accept the Lamarckian explanation the question of the origin of species could easily be settled but this is not possible with our present information. Evolution, he thought, is an inherent quality of a species and this may be orthogenesis or may arise through the action of external influences acting on mutating genes. Most species-characters are not vital and hence could not have arisen through natural selection.

Many animals are able to change their coloration or the degree of their surface shading in accordance with the character of their backgrounds. Change from light to dark and vice versa is due to differences in the arrangement of pigment in certain cells known as melanophores. In some cases these cell changes are under control of the nervous system; in others they are due to the action of hormones derived from the pituitary or adrenal gland. Parker (*Quart. Rev. of Biology* 10, p. 251), gave reasons for thinking that where nerves seem to control melanophores movement the real agents are "neurohumors" set free from the ends of nerves. Thus some of these hormones are carried by the blood, others by nerves. Two sets of neurohumors are recognized, the first water-soluble and transmitted through the blood and lymph, the other oil-soluble and transferred much more slowly by diffusion from cell to cell.

In studying ecological problems ecologists have concentrated their attention on plants or on animals as if the two were unrelated. Taylor (*Quart. Rev. Biol.* 10, p. 291), indicated the error in this point of view for each "biotic" community is composed of both plants and animals who are intimately correlated in the life of the community. It is not possible to affect one without modifying the other.

Limnology is a fairly recent development of ecology and is a study of the correlation between the geology, physics, chemistry, and biology of fresh waters. A comprehensive text book *Limnology* by Welch appeared in 1935, being practically the first general publication on the subject.

Annelids. The breeding behavior of some polychaetous annelids is to leave their burrows in the sand or in rock crevices and to swarm at the surface of the water while discharging their sex products. This swarming occurs in definite relation to certain phases of the moon. One species of the genus *Odontosyllis* in Bermuda and another in the Bahamas has this habit and at the time of swarming give off a considerable amount of luminescent material so that their paths through the water are marked by bright lights. Crowshay (*Nature* 136, p. 559), suggested that the mysterious light which Columbus reported having seen on his first visit to the West Indian Islands may have been the swarming

lights of this *Odontosyllis*. According to the records the moon would have been at that time in the proper phase.

Birds. Sheffer and Cottam (*U.S. Dept. Ag. Bull.* No. 467), reported that the Crested Myna or Chinese starling was introduced into Canada in 1897 and by 1925 the Vancouver colony was estimated to contain 20,000 individuals. Climatic and other conditions would make difficult their spread into the United States but danger of such invasion was noted. Hicks (*Bird Lore* Sept.-Oct., p. 303) gave data gathered in Ohio indicating that contrary to the usual belief the small bird population of the country is not decreasing. The last Congress appropriated \$6,000,000 for the establishment of more bird refuges. Campbell (*Bird Lore* Sept.-Oct., p. 321) stated that in a bird refuge in Three Lakes, Wis., it had been found unwise to attempt to kill predators since this upsets the balance of nature. The results of five years of this policy were uniformly satisfactory. The American Wild Life Institute founded in August, 1935, is supposed to be interested in wild life preservation but since among the founders there are manufacturers of guns and ammunition there is some doubt in the minds of ornithologists as to whether it will act as a conservation agency. Two important books by Herrick are *The American Eagle and Wild Birds at Home*. From the top of a 90 foot tower some 38 feet away from the eyrie of the eagle Herrick was able to observe and photograph many of its activities.

Coloration, CONCEALING. A perennial question (see earlier YEAR BOOKS) is whether the cases where animals resemble their normal backgrounds so closely as to be concealed from human vision really are benefited in the struggle for existence by such resemblances or whether these are merely accidental conditions of no significance. At one extreme are those who think that every resemblance is useful and has arisen through natural selection and at the other are those who hold that most if not all of such resemblances are of no benefit to the animal. The latter argument is based on the belief for which there is much evidence, that what appear to human vision as resemblances might not be so to the natural enemies of the animals in question whose sense organs are very different from ours. Sumner (*Am. Nat.* 69, p. 245), kept fishes in the dark and in the light and as a consequence had animals of very different degrees of shading. These fish were then put into a tank with fish-eating birds. Sumner thought his results indicated that the fish were definitely protected by their resemblance to their background. In another paper (*Proc. Nat. Acad. Sci.* 21, p. 345) Sumner described experiments with the fish *Gambusia* in relation to sunfish. The conclusion was that relative conspicuousness in a given environment determines the survival or not of small fishes. In this case quiescence is a handicap rather than an aid. Reinig (*Jour. of Ecol.* 30, p. 321) reported on observations made on bumble bees and the parasitic bees *Psithyrus* which live in the bumble bee nest. These latter in some cases show marked resemblances to their hosts leading to the suggestion that these resemblances have a protective function. In some cases it would seem probable that this is the case but there were so many exceptions that Reinig concluded that the similarities are due to parallel development in the two cases and are not in any way the result of natural selection.

Crustacea. Many physiological activities are carried on in a rhythmic fashion, these rhythms having a definite correlation with external influ-

ences such as daylight and darkness, high and low tide, etc., and in many cases persist when the immediate stimulus is removed. Pigment in the crustacean eye regularly moves to one position in the light and to another in the dark, the result evidently being to more efficiently utilize the respective degrees of illumination. Welsh (*Biol. Bull.* 68, p. 247), found not only that this rhythmical movement persists under changed light-conditions but he was able to locate a definite hormone responsible for the activity. Carlson (*Proc. Nat. Acad. Sci.* 21, p. 549), found that a substance set free from the middle portion of the eye stalk of the fiddler crab regulates the chromatophore activities of the animal, which immediately grows lighter if the stalk is cut off but darkens if an extract from the eye stalk is injected. Clarke and Gellis (*Biol. Bull.* 68, p. 231), reported observations on the food of marine copepods. In the familiar "food chain" of marine animals these crustacea play an important part since they make up a large percentage of the food of higher animals. It is of interest therefore to determine what is their food. The problem was not easy to settle under laboratory conditions but the authors concluded that bacteria make up the greater part. According to these results diatoms are of subordinate importance. Brown and Banta (*Physiol. Zool.* 8, p. 138), stated that in the *Cladocera* or "water fleas" overcrowding as well as food dilution definitely increases the proportion of male individuals.

Evolution. Zirkle (*Am. Nat.* 69, p. 417), showed that the doctrine of the inheritance of acquired characters commonly known as Lamarckism did not originate with Lamarck but had been accepted for at least 2000 years before his time. Among a long list of these earlier writers Zirkle was able to find only two who denied such inheritance. One was the unknown editor of Aristotle's *Historia Animalium* and the other was Immanuel Kant. The immutability of species was first generally held in the late 18th and early 19th centuries. Earlier workers believed in something very like mutation but this belief did not interfere with a general acceptance of the special creation hypothesis, since it was thought that these mutational changes were not cumulative. The doctrine of pangenesis proposed by Darwin is in its essence as old as Hippocrates for even then it was thought that all parts of the body contribute particles to the sex cells, this being Darwin's explanation of the mechanism by which changes in the body organs produce changes in the sex cells and hence in the individuals of the next generation.

Fishes. Breder and Negrelli (*Ecology* 16, p. 33), found that the sunfish *Lepomis auritus* in an aquarium would if the temperature were sufficiently lowered go into a condition of aggregation similar to the one they assume in nature on the approach of winter. Aggregations are not due to any gregariousness but because each fish orients himself against the current by viewing some stationary object. In an aggregation each fish is such a stationary object to every other fish. If light is withdrawn the aggregation breaks up. Since the effect of the respiratory current is to move the animal forward, they lie headed into a slight current and thus retain a stationary position. Meierhaus (*Comptes Rendus* 200, p. 582), reported experiments on fishes to determine the function of the swim bladder. That they are hydrostatic organs was shown by the fact that if the air is exhausted above the water gas bubbles are given off from the mouths of the fishes in amount determined by the extent of the decompression.

This may go so far as to completely empty the swim bladder.

Heredity. Earlier YEAR BOOKS have reported advances made from year to year in the study of Genetics (the name commonly used to mean a study of heredity from an experimental point of view), especially in its application to Mendel's law. Research in Genetics is largely concentrated on the one hand on the composition and arrangement of genes and chromosomes and on the other in recording applications and modifications of Mendelism. In either case the problems are so technical that a popular summary of them is out of the question. All results point to the existence of a hypothetical entity called a "gene" which occupies in Genetics the importance of the atom in Chemistry. It is the definite something which is responsible for hereditary transmission and several attempts have been made to determine its probable composition and size. Dumerac (*Am. Nat.* 69, p. 125), decided that the gene is a single molecule possessing the power of reproduction. Mutations, he thought, are due to changes of arrangement going on in the molecular group of the gene material which changes must be slight in amount as otherwise they would destroy the reproductive power of the gene. A notable discovery was that of the giant chromosomes (see YEAR BOOK for 1934), on which the localization of genes on the chromosomes is much more definite and certain than is possible elsewhere. Painter (*Genetics* 20, p. 301), reported progress in locating genes on these chromosomes and made some corrections in his earlier maps. Machensen (*Jour. of Hered.* 26, p. 123), gave further details of the technique of this investigation. Flies irradiated with X-rays often show definite deletions of parts of chromosomes, which deletions can be observed microscopically. A comparison of such deletions with earlier determined gene locations often shows that the genes which theoretically lie on the deleted regions are actually absent from the individual flies.

Insects. Since 1927 swarms of the Southern buffalo gnat have caused considerable losses among farm animals in the lower Mississippi Valley. Similar losses had occurred some 40 years earlier but in the interim little was heard of these pests. Bradley (*Science* 82, p. 277), pointed out the precise relation of this insect to Spring freshets. During these times enormous numbers of the insects come from "cut offs," "bays," and lakes formed by river overflows in Mississippi and Arkansas. Laboratory experiments showed that the eggs of the insects have a long incubation period which may be either in quiet or moving water. Under ordinary conditions eggs laid in these cut offs do not find conditions favorable for larval development but the waters provided by overflows give just the conditions needed for a long enough time to allow of development. The long incubation period is an adaptation to the situation where for several months these favorable conditions may not be present. Most insect pests are not native to the country in which they do their worst damage, the usual explanation being that in their native habitat they are kept in check by natural enemies which are absent in their adopted home.

What is said to be the first case on record where a native animal has been suppressed by the activity of an introduced one is given by Van Volkenberg (*Science* 82, p. 278), in a communication from Puerto Rico where the larvae of several native species of beetles of the genus *Phyllophaga* (or *Lachnosterna*) closely related to the June bug of the United States had done enormous damage to the sugar cane by attacks on its roots. Mechanical pre-

ventives as well as the introduction of insect parasites proved entirely without effect and from 1920 to 1924 Surinam toads (*Bufo marinus*) were imported from Barbados with the result that in 1933 it was found difficult to find enough of the grubs for experimental tests. Examination of toad stomachs showed that in addition to the May beetles other pests of the sugar cane were eaten. For a long time the Mediterranean fruit fly has been present in Hawaii and while it does not attack either sugar cane or pineapples which are the leading crops of the islands, it does destroy other fruits which might otherwise be profitably raised. Financed by a grant from the AAA, expeditions from the islands to Africa and Brazil started in 1935 in the expectation of finding insect parasites that would control the fruit fly.

In a number of other cases in Honolulu introduced parasites have proved most successful in controlling pests (*Science* 82, suppl. p. 10). It is a familiar fact that insects will react more definitely to some spectral colors than to others and this trait has been utilized in California in combating the plum moth which has destroyed as much as 25 per cent of the artichoke crop. Experiment showed that these insects are attracted by light-blue and traps composed of a light-blue electric bulb surrounded by electrically charged wires were used. The insects coming to the light were killed by contact with the wires. It was reported that at a cost of about \$30 an acre the artichoke losses were reduced from 25 per cent to 3 per cent. The trap proved also useful in vineyards where it killed the grape leaf hoppers (*Science* 82, suppl. p. 9). In New Jersey it was found that a mixture of light petroleum oil with pyrethrin gave particularly good results in mosquito control.

Four to five gallons of this mixture would do as much execution on the insects (both larvae and adults) as 35 to 40 without the pyrethrin. Sprayed in the air this keeps mosquitoes away for from 4 to 5 hours. It is not poisonous to man and domestic animals (*Science* 82, suppl. p. 8). An Imperial Entomological Conference was held in London in September (*Nature* 136, p. 652). Discussions at this conference mostly dealt with the problems of termite and locust control. With reference to the latter insect and its injurious swarming outbreaks in Africa it was thought feasible to control the pests through prompt dealings with the centres of the outbreaks where the swarming phase of the insects originates. The sixth International Congress of Entomology was held at Madrid in September, with I. Bolívar Urrutia as President.

The mating behavior of the praying mantis (*Mantis religiosa*) was described by Roeder (*Biol. Bull.* 59, p. 203). In this insect the female is larger and stronger than the male and is very voracious so that the male is in great danger of being eaten if the female can catch him. The female has poorer vision than the male and both recognize other insects only if these are in motion. The male usually sees the female before she sees him and immediately "freezes" into a fixed rigid posture which may last for hours. This protects him from attack by the female and at the same time he is able to keep informed of her position by slight movements of her antennae, wings, etc. Guided by these movements he is able to approach her very slowly and if he comes near enough to touch her with his antennae he jumps on her back in which position he is safe from attack. Then follows a series of definite bending movements of the male abdomen to which the female eventually responds by movements of

the ovipositor and the final mating is accomplished by the transfer of a spermatophore to the female.

This clasping phase may last for four hours. Since the insects are usually upside down at this time the male escapes being later eaten by the female by simply dropping down from her back. The normal male carries on the mating movements of the abdomen only when on the back of the female but if the cerebral ganglion is removed these movements begin as soon as the shock of the operation is past. Experiment showed that the last abdominal ganglion governs these movements which are normally inhibited by the cerebral. If a decapitated male is put on the back of a female he will be accepted and a decapitated female will accept a male either normal or decapitated. In this case the mating goes on more rapidly than if the animals are normal. In the female the inhibiting centre is the subesophageal ganglion. The author calls attention to a possible advantage to the race in this condition in that if the male is caught by the female before he reaches her back he may in his subsequent struggles get into the mating posture and mating be accomplished even if he is killed.

Mammals. The aberrant mammal *Ornithorhynchus* has imperfect dentition, lacking upper incisors and canines. Broom (*Nature* 136, p. 219), recorded observations which indicate that it probably is descended from a form having full dentition. The imperfect condition would therefore be regarded as one secondarily acquired and not ancestral. Gresser and Noback (*Jour. Morph.* 58, p. 279), reported that in the eye of the monotreme *Echidna* the shape of the lens and the structure of the retina are of the mammalian type while the cup-shaped posterior portion, a cartilaginous cup imbedded in the sclerotic and the curved cornea, are more like those found in the fishes and birds. Simpson (*Quart. Rev. of Biol.* 10, p. 154), thought that while the Age of Mammals began some 60,000,000 years ago, the first mammals came into existence about 12,000,000 years earlier than that date.

Mollusca. Hopkins (*Jour. Exp. Zool.* 71, p. 195), reported on the cooperative action of adductor muscles and gill ciliation in regulating the current of water flowing through the oyster and the relation of temperature to these processes. Relaxation of the adductor muscles is greatest at 20° C. so that at that temperature the water flow is at a maximum but the gills work most efficiently at 27°-28° C. Since the adductor muscles partly close the shell at such a temperature the action of the muscles is to serve as a brake on the gills. Hopkins (*Ecology* 16, p. 82), found that the sprat of the Olympic oyster *Ostrea lurida*, swim upside down with the result that they come into contact with the lower surfaces of solid objects and hence characteristically are found on the under surfaces of whatever solid support they have. During the year concerted attack was made on the enemies of the oyster fisheries from Cape Cod to Texas. In the Gulf of Mexico a planarian worm known locally as a "leech" was the most destructive and because its life history is largely unknown methods of control are not understood. The subject was under investigation at a laboratory at Apalachicola Florida. Boring snails were studied at Beaufort, N. C., and the starfish problem in Long Island Sound. To secure data on the extent to which starfishes migrate the animals were stained with a blue dye and turned loose, other marking methods having proved useless.

Protozoa. Ivanić (*Biol. Zent.* 55, p. 225), described copulation in the protozoön *Cochliopodium digitatum*, in which the process consists of a com-

plete fusion of two individuals. If both are devoid of nutritive matter the resulting zygote dies. If one has much nutritive matter and the other not, the first goes into the shell of the second where there is a complete fusion of nuclei and cytoplasm. Later this mass divides into a number of daughter cells which move out and form shells of their own. Ivanič thought that this division is a reduction and as a consequence the single animal is haploid. Other writers have questioned whether this is really a sex process. Giese (*Phys. Zool.* 8, p. 116), stated that *Paramacium* would conjugate if food is lacking and cease if food is provided. In this experiment the food was a pure culture of bacteria. Metabolites of the food and of the *Paramacium* may be present in high concentration without leading to conjugation. The conjugating tendency, however, varies with different clones. De Garis (*Jour. Exp. Zool.* 71, p. 209), found that conjugation in *Paramacium* gives rise to lines similar to one another but which may or may not be like the parents. New lines produced in this fashion are hereditarily different from the old.

Reptiles. Mosauer (*Ecology* 16, p. 13), described the reptiles of a sandy desert region in Coachilla Valley, 130 miles from Los Angeles, Calif. Some showed a very complete adaptation to highly specialized desert conditions while those in less specialized environments were more generalized in their structures. Reptiles that live where the temperature may reach 130° F. will nevertheless die as quickly as any if put in an artificial temperature as high as this. The probable explanation is that when under natural conditions they have some special means of regulation. Allard (*Sci. Monthly* Oct., p. 325), described some details of the natural history of the Box Turtles which were kept in an artificial enclosure but under as nearly as possible natural conditions. These animals mate soon after coming from hibernation and the eggs are laid in pits dug by the hind legs of the female, the average number being 4.2. Eggs kept in a warm room in Washington hatched in from 50 to 55 days while

those in the soil took from 69 to 105 days. It was suggested that the rarity of this species north of Massachusetts may be due to the cooler soil which is unfavorable for incubation. The young hibernate without previous feeding but in the second year eat voraciously and become very fat. In the latitude of Washington the hibernation is completed by November. The turtles will eat almost anything, being very fond of table scraps, and become tame enough to eat out of the hand.

Sex Determination. An important biological problem is that of sex determination. What decides that one individual shall be male, another female? As stated in earlier YEAR BOOKS it has been shown in many cases that a particular chromosome has a sex-determining value though the final result seems to be due to the cooperation of this with other chromosomes. Balzer (*Collecting Net*, 10, p. 101), reported results of experiments on *Bonellia*, an aberrant animal probably related to the annelids. The female is free living and has the usual complement of organs. The male is small, degenerate in structure, and lives as a parasite in the intestine and uterus of the female. The larvæ are at first all alike in external appearance, sex differences appearing later. If they develop in clear water about 5 per cent will be males, the others females. If they are reared where they can attach themselves to the trunk of a female about 70 per cent will be male. Similar but less certain results follow if larvæ are kept in extract of the female body. It would seem that the larvæ are potentially capable of developing into either sex and Balzer decided that two factors are involved in the final determination—1. an hereditary factor and 2. the influence of the environment, in this case probably hormones given off from the female body.

ZULULAND, zōō'lōō-länd'. A territory of the Province of Natal in the Union of South Africa. Area, 10,427 sq. miles; population (1921 census), 258,356 (European, 3985; non-European, 254,371). The European population at the 1931 census was 5790. Capital, Eshowe.

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